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SOME ASPECTS OF VENEREAL DISEASE IN CHILDREN.

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By venereal disease in children must be understood infection of the child after birth with the virus of one of the venereal diseases. Simple chancre may be ignored, as it is exceedingly rare in children. The subject under consideration is thus reduced to acquired syphilis and gonorrhœa.

ACQUIRED SYPHILIS IN CHILDREN.

Acquired syphilis differs from congenital or inherited syphilis in the occurrence of a chancre. An infant may be infected (1) directly by a syphilitic wet nurse, by the promiscuous kissing to which infants are subject, or by playing with other infants suffering from congenital syphilis; (2) indirectly, through contaminated spoons, feeding-bottles, etc. Contagion from lesions on the mother's genitals during the passage of the foetus at birth has not been proved, and must, in any case, be exceptional, owing to the protection afforded by the vernix caseosa.

In infants the chancre is small, and often escapes notice; it is usually situated on the face. In older children chancres may occur on the genitals from contamination by a syphilitic nurse or from

precocious attempts at sexual connection with infected children. The chief point in the diagnosis of facial chancres, as of other extra-genital chancres, is to bear in mind the possibility of their occurrence. If they are not thought of they will escape diagnosis.

Differential diagnosis.—The chief points in which acquired syphilis differs from congenital, apart from the presence of a chancre, are as follows: (1) In infants, the absence of lesions which are characteristic of congenital syphilis, such as the natiform skull, epiphysitis, snuffles, bullous plantar and palmar syphilides (the so-called syphilitic pemphigus), the characteristic squamous syphilides on the buttocks and face, especially the circumoral syphilides which leave radiating scars round the mouth; in older children, the absence of Hutchinson's teeth, sudden deafness and interstitial keratitis. Hutchinson's teeth are pathognomonic of congenital syphilis, but interstitial keratitis and syphilitic deafness may occur in the acquired disease, although they are far more common in congenital syphilis. (2) Contrast between the age of the child and the quality of the lesions; for example, a roseola eruption and mucous patches in a child aged 12 years must be recent, and, therefore, acquired; but tertiary lesions are often impossible to distinguish, for a gumma in a child of twelve may be due either to congenital or acquired syphilis, and the lesions are identical.

Acquired syphilis in infants is thus fairly easy to diagnose from early congenital syphilis, but later on in life it is more difficult, and in the tertiary stage it is impossible to distinguish between the two in the absence of such characteristic signs as Hutchinson's teeth. Diagnosis is important from the *medico-legal* aspect with regard to the infection of infants by wet-nurses and criminal assaults on children. For example, a wet-nurse may be accused of infecting an infant with syphilis when the child was really a congenital syphilitic. On the other hand, the nurse herself may be infected by the infant, and could claim damages against the parents. In all cases of venereal infection in children all sources of accidental contamination, by infected towels, linen, etc., or by accidental contact with an infected person, must be excluded before any charge can be brought against a person suspected of having committed a criminal assault.

Another important point in connection with acquired syphilis in children is that this mode of infection may constitute a source of error in cases of supposed transmission of syphilis to the third generation—when the child of a congenitally syphilitic mother is infected with acquired syphilis, and this is mistaken for the con-

genital disease. This is not the place to enter into a discussion of this much controverted subject; it is sufficient to say that, while transmission to the third generation is theoretically possible, it is almost impossible to prove, owing to the difficulty in excluding infection of the second generation with acquired syphilis.

The question of infection of the subjects of congenital syphilis with the acquired disease (which Tarnowsky named "binary syphilis") hardly comes into the scope of the present article, since the immunity conferred by congenital syphilis probably lasts at least till puberty (Finger).

Of greater importance is the relation of syphilis to tuberculosis. Ricord recognised the combination or symbiosis of syphilis and tuberculosis, to which he gave the name *scrofulo-syphilis* (*scrofulate de vérole*), and Fournier pointed out that syphilis was a predisposing cause to tuberculosis, especially to pulmonary tuberculosis. More recently Sergent has emphasised the fact that both acquired and congenital syphilis create a soil which is favourable for the development of the tubercle bacillus, and that in this way the two infections may combine to form "hybrid lesions." This symbiosis of tubercle and syphilis probably accounts for many of the glandular and other affections which used to be designated struma or scrofula. The majority of such cases probably occur in congenital syphilitics, who become subsequently infected with tubercle, where, as Sergent remarks, "the syphilisation of the father prepares a soil for the tuberculisation of the child" (Sergent is evidently a believer in the paternal transmission of syphilis). However, it is not improbable that some cases may originate from the symbiosis of tubercle with *acquired* syphilis in infancy.

The diagnosis of these mixed cases is important, for they will improve considerably under mercurial treatment. All such cases—and this applies especially to chronic bone and joint disease—should therefore be tested both by the Wassermann test for syphilis and by one of the tuberculin tests (cutaneous or subcutaneous) for tuberculosis.

As regards the practical value of his cutaneous tuberculin test, Von Pirquet says that "a positive reaction means a previous infection with tuberculosis. We do not know by the reaction how far this infection has gone." However, he states that the reaction is generally intense in recent infection, but that it often fails in chronic and emaciated cases, and in the later stages of tertiary tuberculosis or tuberculous meningitis. The test is of less use in adults because so many have been infected with tubercle. In doubtful lesions Von

Pirquet considers that an intense positive reaction speaks in favour of the tuberculous nature of the lesion, but does not entirely decide the question. On the other hand, a negative reaction after two or three trials proves that the patient is not tuberculous at all, and hence the lesion is not tuberculous. In children he thinks it useful in diagnosing the nature of chronic intestinal marasmus, bone lesions, glandular swellings, and commencing meningitis.

As regards the subject of the present article, Von Pirquet's cutaneous test (or the subcutaneous method) will be useful in diagnosing between syphilitic and tuberculous lesions of the bones and joints, and in cases of meningitis, etc., especially when performed in conjunction with the Wassermann test.

GONORRHOEA IN CHILDREN.

Gonorrhœa in female children generally takes the form of *vulvo-vaginitis*, the gonococci being able to penetrate the thin epithelium of the vulva and vagina, whereas in adult women the epithelium of these parts is thicker and less easily penetrated. Several epidemics of vulvo-vaginitis occurring in schools or other institutions for girls have been reported, the disease being introduced by an infected individual and spread by means of towels, or in other ways. In boys gonorrhœa usually occurs in the form of urethritis. However, it must be borne in mind that infection may sometimes take place through the nose or mouth, giving rise to gonorrhœal rhinitis or stomatitis. Cases in which infection probably took place through the mouth have been reported by Kimball. Gonorrhœal infection of the conjunctiva in infants, giving rise to the majority of cases of ophthalmia neonatorum, is too well known to need further comment.

The important point to remember in connection with gonorrhœa in children is the fact that this disease, in whatever way it is contracted—whether through the eye, nose, mouth, vulva, or urethra—may be followed by the same complications as in the adult. In female children the disease may spread to the uterus, tubes, ovaries, and peritoneum, and Whitehouse suggests that some cases of endometritis, dysmenorrhœa, and salpingitis in adults may be due to latent uncured gonococcal infection in childhood. In boys gonorrhœal urethritis may be followed by the same complications as in the adult, although local complications affecting the prostate, etc., are rarer, owing to the incomplete development of these organs. In both sexes gonococcal arthritis and septicæmia

may occur, and it is probable that gonorrhœa accounts for not a few cases of obscure joint disease and septicæmic or pyæmic conditions in childhood.

Kimball has reported eight cases of *gonorrhœal pyæmia* in infants under three months old, seven males and one female. In six cases there was arthritis affecting the knees, ankles, and wrists, in the pus from which gonococci were found. In these cases no urethritis, vaginitis, or conjunctivitis was found to account for the infection, but in three cases there was stomatitis in which a diplococcus was found resembling the gonococcus in appearance and in staining reactions. Kimball therefore attributed the infection to gonorrhœal stomatitis. This was supported by the fact that in one case there were tracheal abscesses containing gonococci, suggesting entry by the respiratory tract.

Northrup reported two cases of *peritonitis* following vulvo-vaginitis in girls, aged 9 and 10 years. Gonococci were present in the vaginal discharge, and the source of infection was a woman affected with gonorrhœa, with whom the children slept. Comby has recorded eight cases of peritonitis following vulvo-vaginitis, all of which recovered without operation. Variot has also reported two similar cases in girls, aged 10 and 12 years. Cases of peritonitis secondary to vulvo-vaginitis are usually benign, but fatal cases have been reported by Huber and Baginsky.

Clement Lucas reported twenty-three cases of *gonorrhœal arthritis* in infants following purulent ophthalmia. Of these eighteen were cases of ophthalmia neonatorum contracted during parturition, and five were cases of accidental inoculation in older children. The arthritis generally appeared in the second or third week of the ophthalmia, and affected chiefly the knees or wrists. Gonococci were found in the pus from the eyes and joints. Hallé reported several cases of gonorrhœal arthritis following vulvo-vaginitis; in one girl, aged 7 years, the sterno-clavicular joint was affected; in another girl, aged 5 years, there was arthritis of the hip-joint, which was supposed to be tuberculous.

Pollack investigated 187 cases of venereal disease in children treated at the Johns Hopkins Dispensary. Most of the cases consisted of gonorrhœa and its complications, including three cases of arthritis, nineteen of peritonitis, and one of endocarditis; but double infection with syphilis and gonorrhœa was not uncommon. Acquired venereal disease in children appeared to be more common than was generally supposed, and much of it was attributed to the old superstition that a man can get rid of venereal disease by

having connection with a virgin. The disease ran a milder course than in adults as regards complications, but the number of complications and the duration of the disease appeared to be almost identical.

Diagnosis.—The cases mentioned above will show the importance of gonorrhœal infection in children. We now have to consider the diagnosis of the disease and its more important complications.

Vulvo-vaginitis may be caused by uncleanness, by the presence of thread-worms, or by foreign bodies inserted into the vagina. The diagnosis is easily settled by finding the gonococcus in the discharge.

Urethritis in boys may be due to extension of inflammation to the urethra from balanitis set up by retained smegma and phimosis, or to foreign bodies inserted into the urethra. According to Genevoix, a primary tuberculous urethritis may occur, which may be complicated by stricture and fistula; he also describes a diathetic urethritis in boys due to "arthritism" or "lymphatism," similar in type to the gouty urethritis of adults. Diagnosis is settled by finding the gonococcus.

But the points of greatest interest and importance in connection with gonorrhœal infections in children concern the complications caused by general gonococcal infection, or gonococcal septicæmia.

Gonococcal septicæmia may occur in a severe or in a mild form, but between these two types there are intermediate forms of varying severity.

(1) The severe form may run a course clinically resembling enteric fever, with a temperature ranging between 102° and 104° F., a dry tongue, dicrotic pulse, enlarged spleen, and an erythematous eruption. In most cases, however, the joints are affected, becoming red, swollen, and painful: the condition may then be mistaken for acute articular rheumatism, especially as a cardiac murmur is often present (gonococcal endocarditis). Sometimes the endocarditis is the most prominent lesion, and the joints are affected later; this occurs most often in patients suffering from old valvular lesions, the gonococcus having a tendency to attack parts which have been damaged by previous lesions. Gonorrhœal endocarditis may run a benign course, or it may become malignant and run the usual fatal course of malignant endocarditis. Similarly, the gonorrhœal arthritis may subside or become reduced to one or more joints, or it may take on a malignant and fatal development. In the former case the joints may undergo fibrous ankylosis (as in the mild form of gonococcal septicæmia to be described next); in the latter case the joints suppurate and the condition becomes one of general pyæmia.

The diagnosis of these severe cases of gonococcal septicæmia depends : first, on discovering the source of gonorrhœal infection, usually in the urethra or vagina ; secondly, on cultivation of the gonococcus from fluid aspirated from the joints, and from the blood. The gonococcus can be found in more than 50 per cent. of cases in fluid obtained from the joints, and it has been cultivated from the patient's blood during life in cases of gonococcal arthritis, endocarditis, and other forms of acute gonococcal septicæmia.

In cases of septicæmia, pyæmia, and malignant endocarditis it is therefore important to bear in mind the gonococcus as a possible cause. It is also important to remember that cases of severe gonococcal septicæmia sometimes resemble enteric fever, but more often acute rheumatism.

(2) The mild form of gonococcal septicæmia, which is much more common than the above, constitutes what is usually known as "gonorrhœal rheumatism." In this form fever and general symptoms are mild, or even absent altogether, and the affection is first manifested by swelling of the joints. The joints affected are usually the larger ones, especially the knee, the condition being either simple hydrarthrosis or plastic arthritis, the latter often leading to more or less fibrous ankylosis.

This subacute form of gonorrhœal arthritis, or gonorrhœal rheumatism, may be mistaken for tuberculous arthritis or for joint disease due to acquired or congenital syphilis. Howard Marsh has reported some instructive cases of joint disease in adults which were originally diagnosed as tuberculous, but afterwards found to be of gonococcal origin, the presence of gonorrhœal urethritis being discovered in each case. This diagnostic error is also liable to occur in children, in whom almost every chronic joint affection is attributed to tuberculosis. It must, however, be borne in mind that a child suffering from tuberculosis may become infected with gonorrhœa, so that the joint affection may be a mixed one. Again, as the late R. W. Taylor has pointed out, the gonococcus prepares the soil for other microbes, so that joints which have been affected with gonorrhœal rheumatism may subsequently become the seat of tuberculous arthritis. In such cases the cutaneous or subcutaneous tuberculin test may prove useful.

The joint affections of acquired and congenital syphilis differ from gonorrhœal arthritis by the absence of pain and limitation of movement ; a patient with syphilitic arthritis can usually walk about with comparatively little discomfort, but a patient with gonorrhœal arthritis limps along painfully, and is often laid up altogether.

The Wassermann test is of great assistance here, as it gives a positive reaction in the majority of cases of acquired syphilis and in nearly all cases of congenital syphilis. But here, again, there may be a fallacy, owing to the co-existence of syphilitic and gonococcal infection. A child with acquired or congenital syphilis may be infected with gonorrhœa; gonococcal infection of the joints may take place, and this may be mistaken for syphilitic hydrarthrosis.

R. W. Taylor describes gonorrhœal arthritis affecting the small joints of the hands and feet, sometimes resulting in caries or necrosis; also gonorrhœal periostitis and osteitis of the long bones, especially near the epiphyses (ribs, clavicle, sternum, etc.). Such cases might be mistaken for rheumatoid arthritis, syphilis, or tubercle; but it is possible that these cases ending in caries and necrosis are examples of mixed infection with gonorrhœa and syphilis or gonorrhœa and tuberculosis.

Treatment.—Cases of gonorrhœal infection have been successfully treated by the injection of vaccines of dead gonococci and various forms of serum.

Eyre and Stewart have reported the results of three years' treatment of gonococcal infection by vaccines. They obtained good results in cases of acute gonorrhœa, as well as in cases of chronic gonorrhœa and its complications, including arthritis and iritis. They consider that an autogenous vaccine is not necessary, as almost equally good results can be obtained by using a stock vaccine comprising a dozen different strains. Butler and Long treated twelve cases of vulvo-vaginitis in children between the ages of eighteen months and twelve years by vaccines, regulating the dosage by the opsonic index, and compared the results with those obtained by treating twelve other children locally with argyrol and potassium permanganate irrigations. The results were better in the cases treated by vaccines. Whitehouse also successfully treated two cases of vulvo-vaginitis in children with vaccines, and considers vaccine-therapy the most useful weapon in the treatment of gonorrhœa.

Parkinson has reported some remarkably successful results from rectal injections of polyvalent anti-streptococcus serum in cases of gonorrhœal arthritis, and also in one case of gonococcal pyæmia.

Rogers and Torrey treated cases of gonococcal infection by means of an anti-serum. Gonococci were grown on ascites-agar and inoculated into the peritoneum of a sheep; when the animal was immunised the serum was obtained. In doses of 2 c.c., given on alternate days, this was said to prove useful in complications due

to direct extension, and in arthritis, but not in acute urethritis. Of the above three therapeutic measures the first two would appear to be the most useful. For further details of treatment the reader is referred to the original articles (see references).

As regards the *local treatment*, in addition to the usual irrigation with permanganate of potassium or one of the silver salts, there are two other remedies which seem to be worth a trial. One of these is a preparation of *lactic acid bacilli*, the other is *yeast*. Watson treats cases of gonorrhoeal or mixed infection of the female genital tract with a preparation obtained by filtering "Sauerkultur," made from skimmed milk. Filtering separates the casein and leaves a whey containing numerous lactic acid bacilli, as well as lactose, lactalbumin, and salts. The solution can be strengthened by adding sugar of milk or a powdered tablet of lactic acid bacilli. After disinfecting the parts all excess of disinfectant is removed, and the lactic fluid introduced into the vagina. In some cases the vaginal secretion is said to become normal in a few days, in other cases after the treatment has been repeated weekly for two or three weeks. The lactic acid bacilli are said to act as a substitute for the acid-forming bacillus of Döderlein, which is the supposed protective microbe of the vagina. Whitehouse also recommends this treatment, using a virulent broth-culture of the bacilli together with a powdered tabloid of "lacto-bacilline" and a little lactose every three or four days for a fortnight.

Yeast also appears to have a destructive effect on the gonococci, and has been recommended in cases of chronic cervical catarrh, applied to the cervical canal in the form of bougies containing asparagin or cane sugar as a nutrient medium. This method is obviously inapplicable to children, but the yeast may be introduced into the vagina in cases of vulvo-vaginitis.

Cases of general gonococcal infection show the importance of early diagnosis and treatment in all cases of vulvo-vaginitis and urethritis in children. The prophylaxis of gonococcal septicaemia lies in thorough and early treatment of the primary focus of infection.

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THE OPERATIVE TREATMENT OF TUBERCULOUS MENINGITIS.

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It is perhaps a truism to say that there is no treatment for tuberculous meningitis. Certainly no disease which is seen as often in the wards of a children's hospital is so uniformly fatal. Tuberculous processes elsewhere are frequently limited, or even suppressed, by the activity of the tissues which they have invaded; the power of the poison over the body generally diminishes until the disease becomes so latent as to justify one in calling it cured. But when the meninges of the brain are the seat of the germ's activity the outlook is hopeless.

Although post-mortem evidence teaches that the meningeal affection is almost invariably secondary, and that in a large pro-

portion of cases active tuberculous processes, of which during life there was no manifestation, exist in other organs of the body, clinically tuberculous meningitis, in children more especially, is primarily a brain disease.

The picture is one of cerebral irritation, followed by increased intra-cranial pressure and exhaustion of the great nerve centres of the base of the brain. It is the prominence of the symptoms of increased intra-cranial pressure, confirmed by the finding of an excess of cerebro-spinal fluid after death, that has led many to hope that by surgical means the relief of the pressure might give the tissues time to check, if not overcome, the local activities of the bacilli in the meninges. Surgical interference with a similar affection of the peritoneum would certainly give justification for such hopes. Unfortunately experience has so far shown that they are vain.

Since, when the symptoms of tuberculous meningitis are sufficiently evident to enable one to form a positive diagnosis, the condition of the patient is rapidly becoming desperate, and consciousness is often diminished or gone, I do not think it necessary to labour an excuse for adopting a line of treatment, however heroic, if it can be thought to hold out even the most slender chance of success.

I have seen an operation on the brain performed in several cases of tuberculous meningitis, in addition to those described below, and I am convinced that in no one of them has the operation materially increased the patient's discomfort.

For the purposes of this short paper, the cases I quote are sufficient to illustrate the main points in this treatment of the disease which I think are worthy of attention.

In every case of tuberculous meningitis which I have seen lumbar puncture showed the cerebro-spinal fluid to be under increased pressure, but in no single instance have I found that drawing it off had any effect on the course of the disease.

In Case 1, the first in which I saw an operation for this condition performed, drainage of the base of the brain was most satisfactorily effected. Free drainage was maintained until the end, but this patient died with the usual symptoms of a gradually increasing intra-cranial pressure.

Although I was unable to examine this case after death, I have little doubt that the drainage of the base of the brain had not relieved the intra-ventricular pressure, and the result of the operation in this case was similar to that in others in which I have since

seen it performed. I concluded, therefore, that merely to drain from beneath the tentorium was useless, and so in Case 2 I asked Mr. Burfield to tap the lateral ventricle in order to see whether relieving the pressure in that situation would prove more beneficial. The result was as alarming as it was unexpected. An hour after the operation severe convulsions set in, followed later by fits of screaming, in which the child's face wore an expression of extreme terror, although she seemed completely unconscious of her surroundings, and could not be made to respond to any stimulus. I did not see her during these, and I regret that inhalations of chloroform were not tried, as I believe these violent nerve disturbances were due to the sudden change of intra-cranial pressure, and might possibly have been only temporary. This case was, pathologically, by far the most favourable one I have come across for testing the value of an operation on the brain in this disease, for, with the naked eye, the only organ besides the brain in which tubercles could be detected was the spleen, and there were not many there. In Case 3 Mr. Burfield tapped the lateral ventricle, but took care not to allow the fluid to escape quickly, as we thought that the convulsions which followed the operation in Case 2 might have been due to a too rapid decrease in the intra-cranial pressure. Although the patient had no convulsions until thirty-six hours after the operation, and then they were nothing like so severe as in Case 2, and a great deal of fluid had drained away during that time, there was no appreciable improvement in his condition, and he died with the symptoms usually seen in cases of tuberculous meningitis. Since neither draining from beneath the tentorium nor tapping the lateral ventricles proved alone to be of any value in this disease, I thought that possibly the double operation might give a better result. This was tried in Case 4. Two days after the child's admission a drainage-tube was inserted beneath the cerebellum, and fluid came away freely. The same evening the condition of the child seemed to have slightly improved, but as in spite of the drainage being good this improvement was not maintained, three days after the first operation a second was performed.

On trephining over the left half of the cerebrum the dura was seen to be bulging, and fluid flowed freely when a tube was passed into the lateral ventricle. The operation produced no change in the child's condition, which rapidly became worse until his death on the following day.

At the post-mortem both tubes were found in their proper places, and drainage had been quite effectively established. There were

some small tubercles scattered through the lungs and in the bronchial and mesenteric glands. The spleen was not affected.

My experience has proved to me that in order adequately to relieve the intra-cranial pressure both the base of the brain and the lateral ventricles must be drained. I am forced, however, to the conclusion that this intra-cranial pressure is not the immediate cause of death, which must therefore be ascribed to the effect of the inflammatory process on the brain substance rather than on the meninges only. Operative interference is therefore unfortunately useless.

I may add that my colleague, Mr. Blaxland, recently performed the double operation on a patient with tuberculous meningitis under his care without effecting any relief to the child's condition.

CASE 1.—Boy, aged $3\frac{1}{2}$ years. Always been healthy. Family history good. I saw him on May the 16th, 1905, as he had not been quite well for the last few days. He had once or twice objected to bright daylight and complained of his head, and his nose had bled. During the next few days symptoms rather indefinite and very suggestive of early tuberculous meningitis. May the 22nd: Temperature 100.4° F.; pulse 66. May the 24th: Ears normal. Optic neuritis in both eyes. May the 25th: Weakness of right external rectus and of right side of face.

Mr. H. A. Ballance saw him with me and operated at 5 p.m. He trephined over the occipital bone, and on raising the cerebellum with a flat retractor fluid gushed out. Some tubercles were seen on the under surface of the cerebellum. From May the 25th until June the 11th, when he died, he never recovered consciousness, but on several occasions he seemed to improve and looked much better. The wound was dressed frequently, and it was often necessary to pass a retractor beneath the cerebellum to ensure a free drainage. Any interference with the free flow of the fluid caused slowing of the pulse and a fall of temperature.

When the temperature rose to 101° F. he was always much worse, breathing rapidly and becoming rigid. Cold packing and cold sponging immediately relieved these symptoms. He had one or two convulsions starting in the right thumb. Free drainage was maintained until death. There was no autopsy.

CASE 2.—Elsie H—, aged $5\frac{1}{2}$ years, admitted into the Jenny Lind Infirmary, July the 6th, 1909. Family history unimportant. She had measles two months before admission and since has suffered from occasional headaches, which one week ago got worse and were accompanied by vomiting.

Condition on admission.—Is unconscious and lies in a state of stupor. Pupils dilated; react irregularly. Nothing heard over lungs. No ear discharge. Pulse 66 to 80, irregular; respirations 20; temperature 99° F.

July the 8th: The right external rectus is paralysed. About 2 oz. of clear fluid drawn off by lumbar puncture. July the 9th: Mr. Burfield trephined over the right cerebral hemisphere about two inches above the external auditory meatus. There was considerable bulging of the brain, and on passing a tube into the lateral ventricle fluid poured out freely. At the end of the operation the pulse was regular and the squint had disappeared. An hour later she started severe convulsive movements of the right face and upper limb. These lasted for two hours, and were followed a few hours later by fits of screaming in which the facial aspect was one of horror, and the arms and legs, especially on the right side, were thrown about wildly. She gradually became exhausted and died, having never shown any sign of consciousness since the operation.

Post mortem.—The tube was in the right lateral ventricle, which had been quite thoroughly drained. There was typical tuberculous meningitis.

No tubercles seen elsewhere except on the surface of spleen.

CASE 3.—Stanley T—, aged 5 years, admitted October the 5th, 1909. Family history good. None of tubercle. Had pneumonia two years ago. Was quite well until twelve days before admission, when he complained of headache and seemed feverish. Bowels normal. No vomiting. Became unconscious four days before admission.

Condition on admission.—Lies with legs drawn up in semi-conscious condition. Pupils medium size; react to light. Limbs rigid. Knee-jerks? Babiniski's sign present on both sides. A few râles over both lungs. Pulse 72; temperature 99° F. No optic neuritis. October the 6th: Lumbar puncture showed increased pressure of spinal fluid, which was clear.

October the 7th: At 9.15 p.m. Mr. Burfield trephined over the right cerebral hemisphere. There was considerable bulging of the brain, and on inserting a tube into the descending horn of the lateral ventricle fluid gushed out. The rate of flow was checked by a gauze pad. October the 8th: Condition unaltered. Has had some twitchings of the left arm. Pad removed and fluid allowed to flow freely for a time. October the 9th: Seems slightly more conscious. Had two general convulsions this morning. Pad twice removed. Fluid still coming away freely. Had some more convulsions later, but not severe. October the 10th: Steadily getting worse. Died at 11 p.m.

Post mortem.—Typical tuberculous meningitis. Lateral ventricles dilated, and contained a good deal of fluid. Tubercles in lungs and spleen.

CASE 4.—Sidney G—, aged 9 years. Admitted into the Jenny Lind Infirmary, December the 7th, 1909. Father and mother healthy. Of thirteen children two died of “consumption,” one aged 10 months, and the other aged $2\frac{1}{2}$ years. Except for whooping-cough and rickets has had no definite illness until three months ago, when he had measles, but his mother says he has never been strong. Not been well since measles. Sickness started fourteen days ago. Drowsy for last week.

Condition on admission.—Semi-conscious; neck rigid. Pupils react to light; optic neuritis in both eyes, but more marked in left. Temperature 100° F.; pulse 100; respirations 24. A few râles heard in the lungs.

October the 9th: Three ounces of clear fluid obtained by lumbar puncture. Six p.m.: Mr. Whitwell trephined over the left side of the occipital bone. A rubber tube was inserted beneath the cerebellum. Fluid flowed out freely. December the 10th: Wound draining well. Patient had a good night and takes milk well. December the 11th: Seems a little more unconscious. Fluid coming away freely. December the 12th, 6 p.m.: Mr. Whitwell trephined over the left parietal lobe and passed a tube into the left lateral ventricle. Fluid flowed freely, but not under such pressure as in preceding cases. December the 13th: Child much worse. Both wounds draining well. Died at 4 p.m.

Post mortem.—Both tubes in position and clear. No excess of cerebro-spinal fluid. Tuberculous meningitis. Some tubercles in lungs and a few in bronchial and mesenteric glands. No caseation.

MALIGNANT ENDOCARDITIS OF THE TRICUSPID VALVE IN A CHILD AGED SIX YEARS.*

By FRANCIS H. HAWKINS, M.D., M.R.C.P.,

Physician to the Royal Berkshire Hospital, Reading.

A GIRL, aged 6 years, was admitted under my care on March the 15th, 1910, complaining of abdominal pain, which had come on apparently quite suddenly on March the 11th. There had not been

* Case reported to the Section for the Study of Disease in Children of the Royal Society of Medicine, on May the 27th, 1910.

any vomiting. No blood had been passed by the rectum. The bowels had not been moved since the onset of the illness.

Previous history.—The child had not suffered from any recent illness. There was no history of scarlet fever or chorea. At the time of complaining of abdominal pains she had also complained of pains in the legs.

Condition on admission.—Temperature, 104.2° F.; pulse regular, but weak and rapid. The child was lying on her back, the abdomen was much distended, movements with respiration were very slight, and the walls were rigid, and whenever touched she cried out, "Oh, my belly!" The percussion note was resonant. Nothing abnormal could be felt on rectal examination. On examining the chest no abnormal physical signs were detected. There was no albumin in the urine.

The child having been sent into the hospital as a case of peritonitis, I asked my surgical colleague to see her, and it was ultimately decided to operate, but when the abdomen was opened, beyond some meteorism and one or two small faecal masses, nothing abnormal was observed. On the following day (March the 16th) the child still complained of constant abdominal pain, and she cried out very frequently; the legs were now somewhat rigid and no knee-reflex could be obtained. On March the 17th considerable dyspnoea was present, and on percussion over the thorax the note over both bases was impaired and an area of tubular breathing was noted over the left base. The abdominal pain was still complained of, and on the following day (March the 18th) the child's face was of a dusky colour. Dyspnoea was much increased, and there was evidence of broncho-pneumonia of both lungs. Later in the day the child died; that was three days after admission. No cardiac murmur was detected at any time.

Autopsy.—On opening the abdomen the stomach was found to be distended. The mesenteric glands were enlarged. There was no peritonitis, no collapse of bowel, and no occlusion of the mesenteric vessels noticed. On section of the kidneys a few white infarcts were seen in the cortex; these organs appeared otherwise normal. The liver on section showed a few white infarcts close to the surface. No infarcts were seen in the spleen. Thorax: In the left pleural cavity a small amount of semi-purulent exudation was found. The left lung was bound by recent adhesions to the chest-wall and the diaphragm; there was some recent lymph over the surface. The right lung was slightly adherent at the base. On examining the lungs a few white nodules were seen on the surface, and when a section was made these

nodules—white infarcts—were seen to be quite at the periphery of the lung substance. Both lungs were congested and had scattered over the surface dark, triangular patches, giving much the appearance of red infarcts. There was one large bronchial gland showing evidence of an old caseous focus in the centre. Heart: The mitral and aortic valves were normal. On the auricular surface of the middle cusp of the tricuspid valve a whitish-grey, rounded nodule, about one eighth of an inch in diameter, was seen.

Report from the Clinical Research Association.—Nodule on heart-valve was found to be inflammatory in origin, and crowded with Gram-staining micrococci. The lesion was very suggestive of an ulcerative endocarditis. The lungs showed areas of broncho-pneumonia surrounded by marked congestion and much leucocytic infiltration. These were found to be crowded with cocci like those in the heart-valve; they have the appearance of pyæmic foci. The bronchial gland showed an old caseous focus containing tubercle bacilli. There was no evidence of tubercle bacilli in the lung.

I am recording this case as one of malignant or ulcerative endocarditis, as I think the lesions present, as also the report of the Clinical Research Association, justify me in so doing. This form of endocarditis is by all writers admitted to be rare in children. Holt states that malignant or ulcerative endocarditis is a rare disease in children, and he refers to a case reported by Harris in a boy, aged 4 years, in whom the right side of the heart was affected; the condition was secondary to a cardiac malformation. Holt states that of the cases thus far reported in early life, about twenty-five in number, the great proportion have been in children over ten years of age (1). Osler (2), in his Gulstonian Lectures, states that young children are rarely the victims: there were only three or four instances under ten years of age.

The secondary affections in the case now recorded are of interest; the secondary affection of the lungs which is, I believe, usual when the right side of the heart is affected, and then the presence of white infarcts in the liver and kidneys.

As stated above, the child complained of pains in the legs, so far as one can ascertain, at the same time as the abdominal pains, and I now refer to it in relation to the ætiology. Malignant endocarditis in children seldom occurs as a primary affection. Holt states that it is most frequently secondary to pneumonia, but in my case broncho-pneumonia occurred late in the disease. Next to this he places rheumatism and meningitis, and it is in reference to the question of rheumatism that I allude to the fact of the child having complained

of pains in the legs; the joints were not swollen, neither was pain complained of when they were touched, but we know that in children indifferent pains frequently precede endocarditis. As regards meningitis, clinically there was no evidence of this, and as we were not allowed to open the head, the brain, etc., could not be examined.

Postscript.—In answer to questions raised at the subsequent discussion, Dr. Hawkins said that there was no evidence of embolism in a mesenteric vessel, and such an event was somewhat rare; he had seen only three cases in thirteen years. He called it malignant endocarditis because there was no evidence of ulceration, and he did not think that the term "infective" applied exactly to this type, as he was inclined to regard the endocarditis occurring in rheumatic fever as infective. He did not know what kind of house the child lived in. The temperature of this child was high on admission.

REFERENCES.

- (1) HOLT, L. E.—'Diseases of Infancy and Childhood,' 1903, 2nd edit., p. 622.
- (2) 'Lancet,' i, 1885, p. 505.

Third International Congress on School Hygiene.

Held in Paris, August the 2nd—7th, 1910.

(Compiled from 'School Hygiene,' September, 1910, by Dr. M. D. EDER.)

THREE subjects were set down for discussion before the Congress, the first hour each morning being devoted to these special subjects, whilst the rest of the work was split up into thirteen sections and sub-sections.

Unfortunately much of the value of these set discussions was lost, because on the first and second days there was no discussion at all, and on the third day it was only by extending the meeting for half an hour that a short debate was allowed.

The subject for discussion on the first working day of the Congress was—

Uniformity of Method for Physical Examination in Schools.—The papers by Drs. Mery and Dufestel dealt at considerable length with the routine of medical inspection. Dr. J. KERR's report was agreeably brief, and gave a very practical presentation of the school doctor's aims:

Medical inspection in the school has come before the public in two aspects, namely, (1) for the prevention of infectious disease, and again, (2) the medical inspection in regard to health generally, apart from the infectious diseases.

The prevention of infectious diseases through the schools will only be of importance in sparsely populated country districts; to attack infectious diseases through the schools in towns shows a want of perspective. The field of conflict is in the streets and the homes, and it is there that money and effort must be expended for the greatest results. The maximum of useful efforts by the doctor in respect to prevention of acute infections through the schools is easily attainable. It is work that essentially belongs to the medical officer of health, and only for convenience is handled by the school doctor, but, as already said, the result of school efforts are trivial and scarcely to be improved on in populous places.

The other aspect of medical inspection is in regard to the general health of the children. It originated, in England at any rate, in efforts to improve the educational capacity of the children, and to remedy what was harmful in education. This side of the subject is, however, now in danger of being overlooked in England. Education is a public function throughout civilised lands, and medical inspection has also generally become a public function. There is no question of payment by the individual child or its parents for the doctor's examination or advice. It is now part of the field of public health work, publicly provided and free of cost. As thus set out, then, medical inspection has two purposes:

(1) Its first great purpose is the scientific aim of raising the standard of public health and improving the methods of education by furnishing knowledge as to the various factors affecting the health and development of children. Under this head the school doctor knows no limit or boundary to his efforts or inquiries, save only that he is inquiring into whatsoever things affect or tend to affect the health and efficiency of those working in the schools.

(2) The second purpose is the immediate practical aim of detecting any defect in the individual children with a view to their being remedied; in other words, the doctor seeks out conditions requiring medical treatment.

Now these two purposes are theoretically identical, but when viewed in the stern light of expense they are quite opposed; both are necessary, but not to the same extent.

He was opposed to the routine examination of all children for statistical purposes. "Statistics as commonly used are of more interest or even amusement to the person dealing with them than of value to others. Unless large numbers of facts of similar nature are being dealt with, there is little of value to be obtained from statistics. These only become of considerable value when properly assessed facts are collected for the definite purpose."

What the school doctor has to determine is, does the child—

- (a) Require or not require special medical treatment;
- (b) Require or not require special educational treatment.

Children assessed as normal at the first inspection need have no elaborate notes recorded. Family histories are mere useless waste of time. Any possible weighings and measurements, once standards have been determined, are neither of interest or value to the public.

Weighing and measuring to be of use should be done weekly as a guide to metabolism, and as an adjunct in cases where there is cause to suspect nutritive failure from early tuberculosis or other disturbing cause.

If exceptional treatment, educational or medical, is required, a careful examination of the child must be made and a proper treatment carried out. This is the proper use of public money, which "is too precious, and the many purposes to which it has to be applied are too urgent to waste any of it on mere formalities."

On the second morning Drs. CHOTZEN (Breslau) and DOLERIS (Paris) read their reports:

Instruction on Sex.—A full report in German, with an abstract in three languages, was handed to members of Dr. Chotzen's paper, so that it was an unnecessary waste of time to read the long paper in full. The chief points brought out were:

(1) The importance of correct information about sex for the individual and the race.

(2) The apathy or ignorance shown by most parents on this question.

They suggested:

(1) Young children must receive early instruction at home, use being made of any facts from the plant or animal world that came within the purview of the home.

(2) Up to fourteen, classes should be held in biology, which should include the phenomena of reproduction in the plant and animal world, excluding man.

(3) After fourteen, instruction directly bearing on the phenomena of sex in man should be given both for boys and girls, with the consent of the parents.

(4) Before leaving the college a few lectures in sex hygiene should be given, including the subject of venereal disease.

(5) The lectures should be given by medical men, who should speak not only from a biological, but also from the ethical and social standpoints. Everyone lecturing on that subject must uphold monogamy and maintain that no sexual relations are permissible before marriage.

(6) There should be conferences for parents on the subject, and at every training college a fairly complete course should be given by medical men to the students training for the scholastic profession.

The third morning the set subject was on the **Training and Selection of the School Doctor.**

Dr. DESGUIN (Antwerp) said that any medical man would do very well as a school doctor provided he were also a man of the world with tact and knowledge of human nature. The less of a specialist he was the better. Complicated schedules are impracticable in large centres, owing to waste of time, and futile in small parishes, where the school doctor knows everyone. Confidential relations with teachers are indispensable. Any school committee ought to have sense enough to make a sensible choice.

Dr. LESIEUR (Lyons) took a diametrically opposite view. Every school doctor must have high professional qualifications, both general and special. He ought, also, to be trained in hygiene, bacteriology, and chemistry, and be familiar with questions of sociology and pedagogy. He must undertake no medical treatment at school, and must not encroach upon the sphere of the family doctor. A competitive examination is the best method of selecting school doctors.

Dr. HOGARTH (London) suggested that the solution of the problem lay in a middle course. Different qualifications are needed for routine work in school and for administrative functions. The one type of school doctor is primarily a medical man with wide clinical experience; the other is primarily an administrator with special knowledge of educational hygiene in all its branches. General practitioners are best adapted for the ordinary routine work; their knowledge should be kept up to date by means of post-graduate courses. Teachers have had more than enough of inspection.

Section I.—EDUCATIONAL BUILDINGS AND FURNISHINGS.

The most important subject that was discussed in this section was that of shower-baths in schools.

M. GRENNES gave a full report on shower-baths in Norway. In Christiania nineteen out of the twenty elementary schools are provided with school baths—97 per cent. of the schools in towns have them.

M. CAZALET (Bordeaux) gave a sketch of the movement in France in favour of school baths. He maintained that they were as essential a part of a school building as the lavatories. He was able to inform the Congress that fourteen new primary schools now being erected at Lyons were all to be furnished with shower-baths. He concluded by moving this resolution: "It is desirable that in all educational establishments the use of shower-baths become compulsory, and that in future no school should be built without shower-baths."

Section II.—HYGIENE OF RESIDENTIAL SCHOOLS.

M. FERTÉ (principal of the Louis le Grand Lycée, Paris) and Dr. SHELLY (Hertford) gave a report on the best hygienic arrangements for boarding schools. Dr. Shelly maintained that sunshine and pure, bracing air were the most important of all factors in building a school. An attendant advantage is the greater intellectual output obtainable under favourable climatic conditions. He quoted the experience of Mr. J. S. Biggar, the European manager of the U.S. Express Company, who states "he can accomplish more work in four hours in America than in five or six hours in the less dry and bracing English climate."

Dr. CATHERINE CHISHOLM (Manchester) showed in her paper on **The Influence of the Medical Inspector in Girls' Higher Schools** the value of medical inspection in high schools. She deplored that so few of the girls' high schools have hitherto adopted it, although such inspection has been approved by the Head Mistresses' Association.

Section III.—MEDICAL INSPECTION OF SCHOOLS.

In this section there were three set discussions: (1) **On The Relations between the School Doctor, Teacher, Home and Family Doctor**; (2) **on The Employment of Specialists for Routine Medical Inspection of School Children**; (3) **on The Organisation of Medical Inspection in Rural Districts**.

The set discussions were well attended and some interesting points were raised. On Wednesday, August the 3rd, Dr. CAYLA (Neuilly) defined the relations between the school doctor, teacher, and family doctor, and limited his relations with the parents to a short conference at the beginning of each school year. The relations between teachers and school doctor must be unceasing throughout school time. Dr. GASPARINI (Florence) emphasised the need for almost daily co-operation between teacher and doctor, who must be an educationalist interested in all the subsidiary institutions of the school. He raised no objection to the school doctor visiting the parents at the homes for the purpose of school hygiene, provided that the strictest observance of professional etiquette was maintained.

Most of the subsequent speakers were in general agreement as to the personal and intimate relations which must exist between the doctor and the teacher. Dr. HOGARTH (London) added that the relations between the parents and the school doctor must be equally intimate. Medical inspection of school children was necessary because the parents were ignorant. Their ignorance cannot be so effectively overcome by rules, regulations, and correspondence as by means of informal meetings at the school, when the school doctor should take the opportunity of speaking in general terms upon all subjects relating to the health of children and the prevention of disease.

Dr. STACKLER (Paris) introduced a discussion as to the employment of specialists. The examination of special organs (eyes, ears, etc.) in the course of medical inspection of school children must be undertaken by the ordinary school doctors (*i.e.* general practitioners), and not by specialists. Dr. OEBEKKE (Breslau) carried the discussion much further, and divided the subject into five main heads:

(a) *Medical inspection*, for which an ordinary practitioner attached to every school is sufficient. He must also be prepared to make suggestions for the improvement of the school *régime*, etc.

(b) *Medical treatment* demands a distinct medical service, which should be linked up with the inspection service. School clinics are necessary for large towns; and in other places the employment of specialists, either working at parish dispensaries or school polyclinics, is essential.

(c) *School nurses* are necessary to follow the cases to their homes and to see that the prescribed treatment is carried out.

(d) *Regular conferences* between local school doctors, specialists, nurses, and their administrative chief (or director of school hygiene) are essential in order to secure unity of purpose in so complicated an organisation.

(e) *Central government office* is necessary for co-ordinating the efforts of the various decentralised authorities and agencies which are working in their different spheres on behalf of children of school age.

A warm debate ensued upon the subject of specialists. Dr. PAIRÉ (Deventes) agreed with Dr. Stackler, and thought Dr. Oebekke's scheme was too complicated. Dr. MONT (Bordeaux) thought the examination of eyes, ears, throats, etc., ought to be undertaken only by specialists. Many members spoke, some in favour of specialists, some against. But the fundamental point (predicated by Dr. CAZLA) that the school doctor was never required to make an exact diagnosis or to suggest any line of treatment was ignored. Obviously the routine work of school inspection can be undertaken by an ordinary general practitioner—and that was the verdict of the meeting. When, at the adjourned discussion, the following resolution, "That the employment of specialists under the control of the school medical officer is necessary for the medical inspection of school children," was put, it was lost by 35 votes to 10.

Dr. GAGNIÈRE (Thiais) urged that in any serious system of organisation in rural districts the school doctor must be the fountain head of all work; therefore he must be the local parish doctor, or if there be more than one, they will naturally take the school doctor's duties in turn. But each county (or department) will also retain the services of one or two medical inspectors, whose duty it will be not only to make tours of inspection, to help and advise the local school doctors in their work, but also to be responsible for the administration of the other branches of school hygiene in their area.

Dr. FREMANTLE (whose paper was read by Sir GEORGE FORDHAM) gave

a full account of the principles and details of the organisation of medical inspection in the rural county of Hertford. It was an interesting communication as suggesting a kind of middle course between the appointment of a limited number of *ad hoc* medical inspectors and the employment of local parish doctors for the work. In small urban districts Dr. Fremantle fully justified the employment of local medical officers of health, but in rural sanitary districts the area is too wide for the medical officers of health to be able to exert personal influence with teachers, parents, and children. For rural districts time alone will perfect a system when the general principles of medical inspection are more clearly understood, and when less attention is paid to statistics and trivial details and more attention to the individual child and to general educational hygiene.

Other papers included **Medically Inspected School Children**, by Dr. WILLIAMS (Bradford); and **A London School Clinic**, by Dr. M. D. EDER.

Section IV.—EDUCATION AND PHYSICAL TRAINING.

This subject took pre-eminence at the Congress by reason of the excellent and charming demonstrations of gymnastic and folk dances every afternoon.

The President, M. CAZALET, opened the section by a short speech on **The Value of Physical Education**. On his initiative the following resolution was passed: "Physical education should be made compulsory for boys and girls in all schools." Dr. PIASECKI (Poland) and Dr. De ROTTERMUND (Poland) read papers on **Games and Physical Education in Poland**. According to Dr. PIASECKI games are being taken with extraordinary enthusiasm throughout Poland, where even *boy scouting* is having an enormous success. Dr. ROTTERMUND explained that besides Swedish drill, swimming and chorus singing are included in the physical education of the school children of Warsaw.

Dr. HALLS DALLY (London) dealt with the necessity for systematic instruction in respiration. He pointed out what large numbers of children there are who do not breathe properly. His suggestion was, in the first instance, to hold classes for teachers conducted by a medical man, and for the teachers subsequently to give daily instruction to the children during a portion of the time given up to physical exercises.

Dr. DEMENY (Paris) read a paper on **The Principles of a New Method of Gymnastic Exercises**, according to which physical education of the muscles must proceed side by side with the education of the corresponding cerebro-spinal centres. Grace and harmony must be combined with all movements. All automatic movements must be eliminated. Economy of effort, skill, suppleness, readiness, grace, and elegance, these are the marks of a good posture and good bodily movements.

Miss GRAHAM (London) said that the girls in all the elementary and secondary schools should have the benefit of the physical exercise long given to boys; she regarded games, especially field sports, as possessing distinct advantages over other forms of exercises.

Dr. HULBERT (London) spoke on **The Cultivation of Vocal Tone and its Importance to Teachers**. The education of the voice is a special form of physical education based upon certain definite scientific principles. He commented upon the psychology and the physiology of the vocal movements, their muscular nature, and the physical constitution essential for their production. The tone of the voice is the result of the co-ordinated move-

ments of different groups of muscles ; the condition of the vocal apparatus is dependent upon the general physical condition. Physical education must take the quality of the voice into account ; exercises, respiratory and others, must be co-ordinated with the movements that affect the voice—this is a real index of the whole.

As against the position taken up in different ways by Dr. Demeny, Dr. Hulbert, and others, there was the paper by Mme. NADINE TAEKE, who was for Ling, and nothing but Ling. She believed that in a few years the Ling's gymnastic system would be accepted by every properly instructed person throughout the whole world. This system alone develops the respiration, circulation, digestion, etc. She hoped that France would put herself at the head of the widespread movement to spread the Swedish system throughout the whole world.

Dr. HERTZ (Copenhagen) drew attention to some conditions of ill-health among girls as a result of gymnastic exercises. Among seventy-two little girls who had complained of various ill-effects, he had found fifty-five complaining of headaches, vertigo, and nausea : another seventeen complained only of headache. The first fifty-five were in good physical health, but had various nervous manifestations. In the other seventeen there were no decided signs of nervous instability. He considered that violent exercises should never be part of the gymnastics for girls, but did not advise the teachers to regard these complaints as sufficient to deprive the girls of the benefits of gymnastic exercises.

(To be continued.)

Abstracts from Current Literature.

Medicine.

Typhoid fever in children (*'Pediatrics,'* xxii, 1910, p. 341).—**Samuel Adams**, in a study of 550 carefully selected cases of typhoid fever occurring between the years 1872 and 1908, in the Children's Hospital, District of Columbia, states that typhoid fever in children differs only in degree from the disease in the adult, and that while the clinical phenomena differ somewhat, the structural changes are identical, regardless of age. With respect to season, the majority were admitted between July and October, with a larger preponderance in August. The proportion of boys and girls was about equal. There was only one case under one year of age, but a decided increase after that age, especially after four years of age. In most of the cases the mode of conveyance could not be traced ; forty-three were attributed to exposure to other cases, twenty-five to water, four to milk, while so far back as 1872 a case was attributed to oysters. The mode of onset was insidious in most cases ; usually with diarrhœa and malaise. The fever was generally of the remittent type, accompanied by much sweating at the height of the fever and terminating by lysis ; delirium was frequent as the result of high pyrexia. Rose spots were found in only about one fourth of all the cases, but it is pointed out that 20 per cent. of the children were negroes, in whom rose spots are less common. Only 3 per cent. were

attacked with perforation and died. The specific treatment was mostly cold sponging for the fever. Some semi-solid food was allowed if it suited.

J. E. BULLOCK.

Diphtheria in the Metropolitan Asylums Board Hospitals ('*M. A. B. Reports*,' 1909).—4393 cases were admitted during 1909 as compared with 5230 during 1908 (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1910, p. 137). Owing to the suggestion that the decline in mortality following the introduction of antitoxin was largely due to the inclusion of purely bacteriological cases, these have been returned this year in a separate column. Notwithstanding the exclusion of these cases the mortality was only 9.8 per cent. as compared with 30 per cent. before the introduction of antitoxin. The mortality at the various hospitals ranged from 7.0 to 13.8 per cent. Among 895 laryngeal cases there were 140 deaths—a mortality of 15.6 per cent. On 346 tracheotomy was performed, on 41 intubation, and on 22 both operations, among whom there were 113, 2, and 8 deaths respectively. The percentage error of diagnosis in cases admitted was 16.8. Among the 930 wrongly diagnosed as diphtheria were 82 of measles, 621 of tonsillitis, 17 of pneumonia, 62 of laryngitis, 14 of rhinitis; 27 had no obvious disease or were not diagnosed. Of complications paralysis occurred in 13.94 per cent., albuminuria in 25.34 per cent., and otitis in 5.4 per cent. Serum rashes were noted in 30.3 per cent., joint pains in 3.0 per cent., and abscesses at the injection site in 0.57 per cent. Of sequelæ, scarlet fever occurred in 6.75 per cent., measles in 1.45 per cent., and whooping-cough in 0.24 per cent.

J. D. ROLLESTON.

Diphtheria in Buda-Pesth ('*Pest. Med.-Chir. Presse*,' 1910, p. 153).—**S. Gerlóczy**.—The case mortality among 509 patients treated with antitoxin at St. Ladislaus' Hospital in 1908 was 10.4 per cent.—a lower figure than in previous years at this hospital (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1909, p. 234). Intubation was performed on 70 cases, of which 40 recovered. The average duration of the tube in the larynx was fifty hours. Albuminuria was found in 171 cases, palatal and laryngeal palsies in 22, pneumonia in 12, and herpes labialis in 7. Serum rashes, 54 of which were urticarial, 13 scarlatiniform, and 10 morbilliform, occurred in 22.5 per cent. As in previous years many cases were suffering from mixed infections on admission to hospital, or contracted a secondary disease subsequently.

J. D. ROLLESTON.

Diphtheria of the stomach ('*Deutsch. med. Wochens.*,' No. 5, 1910, p. 246).—**Reiche**, at the Hamburg Medical Society, showed a specimen of fibrinous gastritis due to Klebs-Loeffler bacilli from a child, aged 18 months, who had died of severe faucial diphtheria on the fourth day of disease.

J. D. ROLLESTON.

Scarlet fever in the Metropolitan Asylums Board Hospitals ('*M. A. B. Reports*,' 1909).—15,384 cases of scarlet fever were admitted during 1909 as compared with 19,629 admitted in 1908 (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1910, p. 137). The mortality was 2.4 per cent. The percentage error of diagnosis was 6.8. Among the 1132 wrongly certified as scarlet fever were 93 of measles, 53 of rubella, 214 of tonsillitis, 278 of erythema, and 248 had no obvious disease or were not diagnosed. The commonest complications were otitis (12.7 per cent.),

albuminuria (9·32 per cent.), secondary adenitis (7·68 per cent.), nephritis (5·61 per cent.), and rheumatism (3·88 per cent.): 322, or 1·8 per cent., had relapses. There were 299 cases (1·85 per cent.) of post-scarlatinal diphtheria with 4 deaths, a mortality of 1·34 per cent. Twenty-seven of the post-scarlatinal cases were laryngeal, but all recovered.

J. D. ROLLESTON.

Malignant scarlatina; death from suprarenal insufficiency (*Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, xxix, 1910, p. 689).—**J. Comby** records a case in a boy, aged 6½ years, admitted to hospital on the third day of disease. The symptoms were—repeated vomiting, diffuse abdominal pain, fœtid diarrhoea, and arterial hypotension. The urine contained much albumin, but no acetone. Death occurred suddenly on the day following admission. The autopsy showed multiple visceral congestion and destruction of the two suprarenals by hæmorrhage. No macroscopical lesions were found in the pancreas.

J. D. ROLLESTON.

Rapid death in scarlet fever; lesions of suprarenals and pancreas (*Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, xxix, 1910, p. 598).—**L. Tixier and J. Troisier**.—A girl, aged 3 years, died on the seventeenth day of a severe attack of scarlet fever, the symptoms preceding death being profound asthenia, emaciation, and tachycardia. The blood-pressure taken by Potain's sphygmomanometer on the day before death ranged between 50 and 60 mm. *Autopsy*: The pancreas weighed 58 gm. instead of the normal 20 to 30, and on section presented the appearance of yellow wax instead of the healthy pinkish-white colour. Histological examination showed a peri- and intra-acinous infiltration of leucocytes, which were chiefly polymorphonuclears, and a slight degree of interstitial sclerosis. The urine had not been examined for sugar. The whole of the right suprarenal and a large portion of the left had been destroyed by hæmorrhage. On histological examination the protoplasm of the cortex was found to be quite free from the normal droplets of fat. The medulla was almost entirely destroyed by hæmorrhage. Apart from congestion of the liver and kidneys there was a remarkable integrity of the other organs, including the parathyroids and hypophysis. There was no evidence of tuberculosis, so the writers are inclined to attribute the emaciation to the pancreatic lesions. The suprarenal lesions explain the asthenia, tachycardia and hypotension, symptoms which in previous years would have been attributed to disease of the myocardium. In the present case there were no degeneration nor hyperplastic lesions of the cardiac muscle.

J. D. ROLLESTON.

Mitral and aortic disease in scarlet fever (*Journ. des Praticiens*, 1910, p. 295).—**Nobécourt**.—A girl, aged 6 years, was admitted to hospital on December 15 with scarlet fever of a few days' duration. December 26: Double otitis. January 12: Aortic incompetence and pericardial friction. The latter disappeared in a few days, but the aortic lesions persisted, and subsequently mitral incompetence developed. The heart is fairly often affected in the severe forms of scarlet fever, but the phenomena observed are due to cardiac dilatation. Formerly this was attributed to myocarditis, but nowadays the primary lesion is considered to be situated elsewhere—usually in the suprarenals. Lesions of the endocardium and pericardium are much rarer. Signs of well-marked endocarditis in the first few days of the disease are almost always due to a previous infection. In the present case

the heart was perfectly healthy during the first month following the onset of scarlet fever, and the evolution of the complication was closely followed. The endocarditis of scarlet fever is due to secondary infection, of which the streptococcus is the most frequent agent. Rapid development is one of its most striking characteristics. Whereas in acute rheumatism the lesions do not acquire their definite stethoscopic character for several weeks, in scarlet fever, as illustrated by the present case, they are well-established in eight or ten days. The pathological anatomy corresponds to the clinical condition. Rheumatic endocarditis is usually plastic and scarlatinal endocarditis ulcerative. According to Nobécourt scarlatinal pericarditis usually ends in suppuration, so that the present case was exceptional in this respect.

J. D. ROLLESTON.

Measles and psoriasis ('*Deutsch. med. Wochens.*,' 1910, p. 368).—**J. F. Friedjung**.—A girl, aged 4 years, was admitted to hospital in 1898 for unusually severe psoriasis of two years' duration. Ten days after admission she developed measles complicated by pneumonia. During the attack the psoriasis scales fell off, and at the end of a fortnight only pigmented areas served to mark the site of the psoriasis eruption. During the next twelve years the girl had only slight attacks of psoriasis, which rapidly yielded to chrysarobin treatment. Friedjung suggests that repeated injections of serum in severe cases of generalised psoriasis might cause a rash which would have a beneficial effect upon the pre-existent eruption.

J. D. ROLLESTON.

Measles and psoriasis ('*Deutsch. med. Wochens.*,' 1910, p. 125).—**Rubens** records a case of severe psoriasis of fourteen years' duration in a man, aged 28 years, in whom all the scales fell off on the third day of an attack of measles. The beneficial effect of the acute exanthem may be explained, either by the hyperæmia induced or by Lassar's theory that psoriasis is an infectious disease, in which case the weaker virus was overpowered by the stronger.

J. D. ROLLESTON.

Measles complicated by subcutaneous emphysema ('*Hospitalstidende*,' 1910, p. 255).—**F. Teilmann**.—A girl, aged 7½ years, on the eighth day of an attack of measles complicated by capillary bronchitis developed subcutaneous emphysema, which appeared first in the cheeks, and on the following day extended down to the pubic symphysis and inguinal folds in front and to the iliac crests and lower part of the sacrum behind. The upper arms were also slightly involved. Examination of the mouth showed a slight swelling of the mucous membrane in the region of Stensen's duct. The emphysema disappeared in a few days, first in the lower part of the trunk, and last of all in the cheeks. Its occurrence is attributed to forcible dilatation, by coughing, of Stensen's duct, through which the air was drawn into the subcutaneous tissue. Reference is made to Tillaux's case of a glass-blower who developed a gaseous swelling in the parotid region.

J. D. ROLLESTON.

Complications of German measles ('*Semaine Méd.*,' 1910, p. 313).—**C. D. Martelli**, after alluding to the severe attack recently described by Cheinisse (*v. BRITISH JOURNAL OF CHILDREN'S DISEASES*, 1907, p. 163), records three instances in an epidemic of forty-six cases in which lobar pneumonia developed in convalescence. Two of the patients were girls, aged

5 and 7 years, and one was a boy, aged 4 years. In none was it possible to incriminate a special virulence of the pathogenic agent, an insufficient resistance of the patient, or the influence of a hereditary taint. In six cases Martelli found albuminuria with casts and increase in the amount of urea. In four of these the rubella had run a very mild and apyretic course, and in two the albuminuria might possibly be attributed to the rise of temperature and intestinal disturbance. In only one of the forty-six cases was hæmaturia noted. Reference is made to the epidemic recorded by Bambaca, who found well-marked hæmaturia preceded by slight albuminuria in every case (*v. BRITISH JOURNAL OF CHILDREN'S DISEASES*, 1909, p. 36).

J. D. ROLLESTON.

Pseudo-rheumatism in rubella (*'Lyon Méd.'* cxiv, 1910, p. 1127).—**Leclerc**.—Rheumatoid pains, which are not infrequent in scarlet fever, have not hitherto been noted in rubella. Leclerc records instances of this complication in two sisters. The eldest girl, aged 19 years, on the fifth day of a mild attack of German measles had slight pain in the wrists. The next day these joints became swollen and the temperature, which had hitherto not been above 100° F., rose to 102·2° F. The ankles and knees also became affected, the peri-articular tendon sheaths as well as the joints becoming involved. The affection lasted five or six days. There was no albuminuria. The younger sister, aged 17 years, three days after the appearance of the eruption had pains in the wrists only, without any rise of temperature.

J. D. ROLLESTON.

Atypical varicella (*'Wien. med. Wochens.'* No. 24, 1910, p. 898).—**Anna Königsberg**.—A child, aged 13 months, was brought to hospital on April 6 with whooping-cough of a fortnight's duration. On the 11th varicella developed, and fresh lesions appeared during the next six days. None of the spots showed the usual red areola. Death, preceded by double broncho-pneumonia, took place on the 24th. The protracted course of the varicella and the absence of any local reaction are attributed to the influence of the intercurrent pneumonia.

J. D. ROLLESTON.

Varicella in adults (*'Montpellier Méd.'* xxx, 1910, p. 405).—**Euziève** and **Caizergues** record two cases in women, aged 42 and 27 years respectively. In the first case the source of contagion could not be discovered; in the second several children in the same house had recently had the disease. Both women had a typical attack, in which the constitutional disturbance was relatively severe.

J. D. ROLLESTON.

Varicella as a cause of nephritis (*'Journ. of Amer. Med. Assoc.'* May 28, 1910).—**Beardsley** reports two cases in which varicella was complicated by acute nephritis. One was an Italian girl, aged 6 years, who was brought on account of a definite varicella rash. The temperature was 103·2° F. and the tongue was thickly coated. The patient was slightly delirious. There was a history that she had not urinated for eighteen hours and that the urine when last passed resembled blood. After a hot pack and purgation the urine was found to be highly coloured, sp. gr. 1026, albumin 1·2 grm. (Esbach). Large numbers of granular casts, a few hyaline, and a considerable number of red blood-corpuscles were present. The casts continued for six days and then gradually disappeared, but the albumin persisted for two weeks. Some six weeks later, however, she again attended for "stomach

trouble," when albumin and casts were again found, and these have persisted since. The second case was that of a coloured boy, aged 5 years, who was the subject of hæmorrhagic varicella. The urine was highly albuminous and contained casts in large numbers. Two weeks later there was no albumin, but a few hyaline casts were found. Six weeks later the urine was normal. After a further three months the child developed lobar pneumonia, and the urine again presented the picture of an acute nephritis. Three weeks after convalescence albumin and casts were still present.

T. R. WHIPHAM.

Faucial angina in mumps (*Thèses de Montpellier*, 1908-9, No. 88).—**R. Sassy**.—Faucial angina is a common symptom in mumps; as a rule it runs a mild course, developing before or at the same time as the parotid swelling and disappearing with it by the fifth or sixth day. In rare cases the angina presents a special intensity and may constitute the dominant symptom of the disease. It is then not erythematous, as in the mild forms, but herpetic, pultaceous or pseudo-membranous, and may be accompanied by high fever. In these severe forms the middle ear is not affected, though otitis is an occasional complication of the mild forms. The thesis is based on the study of an epidemic of mumps in a hospital at Montpellier, where 27 out of 115 cases of mumps developed angina. Three cases are recorded in soldiers, two of whom had herpetic and one pultaceous angina. Orchitis occurred in each case. All recovered.

J. D. ROLLESTON.

The blood-pressure in epidemic cerebro-spinal meningitis (*Arch. of Int. Med.*, May, 1910).—**Robinson** finds that increased intra-cranial tension is almost invariably present in cerebro-spinal meningitis. Heightened blood-pressure is often met with in the early acute stages, when exacerbation of the symptoms occur, at a late stage of the disease, and when it has become chronic, and seems to bear some relation to the severity of the symptoms. Lumbar puncture has no constant effect on the blood-pressure, though it is usually accompanied by a fall. The author's observations lead him to the conclusion that heightened intra-cranial tension does not lead to an increased blood-pressure unless it is late in the disease, when internal hydrocephalus may develop as a result of blocking of the foramina of the fourth ventricle.

T. R. WHIPHAM.

Paradoxical manifestations in the urine in cerebro-spinal meningitis (*Rev. de Méd.*, March, 1910).—**Salebert** and **Thubert** state that unlike that found in other febrile conditions the urine in cerebro-spinal meningitis is copious and clear and contains an excess of nitrogen and phosphates even when the disease is at its height. Sero-therapy produces only a comparative diminution in the proportions excreted. A fall in the temperature as the result of the injection of serum does not always mean an amelioration of the symptoms, for the proportion of nitrogen may remain high, showing that the disease is still virulent. It is necessary to continue the serum treatment until the amount of urea diminishes.

T. R. WHIPHAM.

A new sign in the rheumatism of childhood (*Arch. of Pediat.*, xxvii, 1910, p. 353).—**J. R. Clemens**, since his previous paper in the *Archives* (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1905, p. 161), has so frequently observed enlargement of the thyroid in the rheumatism of

children that he regards it as a sign of the disease. In some of his cases the thyroid enlargement preceded all other manifestations of rheumatism. In others its appearance was later, the enlargement persisting in association with chronic endocarditis after all the other rheumatic phenomena had disappeared. The degree of enlargement is not great, but is sufficiently pronounced to give an unusual fulness to the neck. Clemens considers that in children with an enlarged thyroid careful inquiry should be made as to a past history of rheumatism. J. D. ROLLESTON.

Malaria in children (*Grèce Méd.*, xi, No. 18).—**Cardamatis** finds that immunity from malaria in Greece practically extends to the end of the first year. Between the ages of two and seven years children are particularly liable to malarial infection, especially during the third year. Malaria in the mother does not affect the foetus in any way, and it is probable that antibodies may develop in the foetal blood or in the foetal portion of the placenta which combat the malarial germs. Malaria in both children and adults in Greece is chiefly of the tertian æstivo-autumnal type, but children are more apt to develop the chronic than the acute form.

T. R. WHIPHAM.

Hereditary syphilis and Wassermann's reaction (*Berl. klin. Wochenschr.*, July 25, 1910, p. 1402).—**Mulzer** and **Michaelis** report the results of their investigation of the Wassermann reaction in hereditary syphilis and come to the following conclusions: (1) Sucklings with manifest syphilis react in the same proportion as syphilitics in the secondary stage (96 per cent. positive); (2) the positive reaction does not appear till the outbreak of syphilitic symptoms; (3) in children over a year old the proportion is the same as in sucklings; (4) latent syphilitic children give the same proportion of positive reactions as adults in the early latent period; (5) the transformation of the Wassermann reaction through specific treatment appears to be obtained with more difficulty in children than in adults; (6) the mothers of syphilitic sucklings give a positive reaction in the great majority of cases (83 per cent.); (7) when there are several children of syphilitic parents the last born children free from symptoms as a rule give a negative reaction. C. F. MARSHALL.

Loss of weight in congenital syphilis (*Thèses de Paris*, 1908-9, No. 130).—**R. Lerenard**.—Congenital syphilis in the newly born is sometimes manifested by a more or less considerable loss of weight in spite of sufficient nourishment and an absence of digestive disturbance. In typical cases the loss is sudden, rapid, and progressive. It may occur in the first few days after birth, or not develop until later. It may be associated with fever or various specific lesions, but it is often the only symptom of the diathesis. It has therefore considerable diagnostic value. In fatal cases specific lesions are often found in the liver, spleen, or kidneys. Mercurial treatment adequately administered is usually followed by a gain in weight. The prognosis is therefore favourable. J. D. ROLLESTON.

Syphilis and rickets (*Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, xxix, 1910, p. 810).—**H. Dufour** and **J. Huber**.—A girl, aged 10 months, with typical lesions of severe rickets, presented hypertrophic mucous tubercles on the vulva and round the anus. There was no history of syphilis in either parent, but the child's blood yielded a positive Wassermann's reaction. A similar case had previously been recorded by Dufour in a

child, aged 18 months, whose mother had syphilitic hemiplegia. Both mother and child gave a positive reaction. The writers think that fresh light can be thrown on the relations between congenital syphilis and rickets by the use of Wassermann's test on parents and children, and regard early and severe cases of rickets as more frequently due to congenital syphilis than to any other cause.

J. D. ROLLESTON.

The tongue in inherited syphilis (*Thèses de Paris*, 1909-10, No. 308).

—**L. Touret.**—The tongue may present lesions characteristic of each of the periods of inherited syphilis, which Touret has classified according to Gaucher's nomenclature into secondary, tertiary, quaternary and quinary. In the secondary periods mucous tubercles are more frequent than in the adult. They may be difficult to diagnose, especially from the athreptic ulcers described by Parrot. Sclero-gummatous glossitis, characteristic of the tertiary period, is rare, and is clinically identical with that of acquired syphilis. Leucoplasia is found in the quaternary period. Though rare it is of importance as aiding in the diagnosis of inherited syphilis. Quinary inherited syphilis presents certain dystrophies, of which the most constant are exfoliating marginal glossitis and scrotal tongue. The thesis contains thirteen cases, one of which is original.

J. D. ROLLESTON.

Syphilis acquired at birth (*Hospitalstidende*, 1910, No. 22, p. 618).

—**Haslund** records an exception to Profeta's law. A child, aged 5 weeks, presented seven excoriating chancres on the cheek, associated with adenitis in the parotid region. The secretion from the chancres showed the *Spirochaeta pallida*. Wassermann's reaction was negative at first, but was positive a month later. The only secondary symptom was coryza. The mother had been infected during the sixth month of pregnancy, and at the time of delivery had a papular eruption on the vulva.

J. D. ROLLESTON.

Syphilitic chancres in children (*Thèses de Paris*, 1909-10, No. 203).

—**A. Manne.**—This thesis contains the histories of thirty-one cases, many of which are original, of acquired syphilis in children whose ages ranged from nine months to fifteen years. The most frequent modes of contamination are lactation, kissing, and the use of soiled toilet articles, playthings and bed- or body-linen. The seat of the chancre is usually extra-genital, and is most often on the face, which was affected in thirteen out of twenty-six cases of acquired syphilis in children recorded by Fournier. Four cases of accidental inoculation of the genitals are related. In only ten of Manne's cases was the chancre of venereal origin. The duration of the primary lesion in children is transient, and there is much risk of its being unrecognised if the corresponding lymph-glands are not examined. In marked contrast to the congenital disease the prognosis of acquired syphilis in children is usually favourable.

J. D. ROLLESTON.

Gonococcal septicæmia (*Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, 'xxix, 1910, p. 712).—**A. B. Marfan** and **R. Debré.**—A girl, aged 10½ years, was admitted to hospital with pain in the hypogastrium of a week's duration. Her general condition at first suggested typhoid fever, but closer examination showed the existence of pelvic peritonitis and a scanty purulent discharge from the vulva containing gonococci. Auscultation of the heart revealed a loud mitral systolic murmur conducted into the axilla. The blood showed intense anæmia and the presence of gonococci.

The following day pericarditis developed. Wright's vaccine treatment was then instituted, and eighteen and a half million gonococci were injected subcutaneously in the course of ten days. No improvement resulted, and signs of pleurisy in the left lung appeared. Owing to the morphological and biological affinities of the gonococcus and meningococcus, and in this particular case to agglutination of the gonococci in the blood by anti-meningococcic serum, Dopfer's and Flexner's anti-meningococcic serums were tried. After the second injection, when the girl had received 25 c.c. in all, a severe serum reaction occurred, and discouraged further injections. It was not till a fortnight later that gradual improvement started. On discharge from hospital after seven weeks' stay the vulvitis and peritonitis were cured, but the mitral incompetence and pericardial symphysis persisted, and were still present when the child was seen nine months later. In the subsequent discussion, **L. Martin** and **Dufour** attributed the symptoms of anaphylaxis to the existence of tuberculosis, which was manifested in the patient by positive cuti- and intra-dermo-reactions, although the ordinary physical signs were absent.

J. D. ROLLESTON.

Rectal gonorrhœa in childhood (*Münch. med. Wochens.*, May 3, 1910).—**Kaumheimer** advises that more attention should be paid to the rectum in cases of gonorrhœa, especially in childhood. An involvement of the rectum may be the cause of intractable vulvo-vaginitis in girls, the infection occurring from time to time after the vaginal lesions have been cured. Rectal gonorrhœa seldom affords any clinical signs and thus may escape detection.

T. R. WHIPHAM.

The cutaneous tuberculin test (*Arch. of Pediat.*, xxvii, 1910, p. 161).—**C. F. von Pirquet** says that a positive reaction means a previous infection with tuberculosis, whether the infection be limited to a single gland or has destroyed half the lungs. The reaction is generally very intense if the infection has just started, or if there has recently been a progress. A negative reaction is not so conclusive as a positive one, for there may not be enough anti-bodies to give the reaction. Hence the frequency of a negative result in the later stages of miliary tuberculosis and tuberculous meningitis. Owing to the frequency of previous infection the test is not of great value in adults, but is especially indicated in the following conditions in children: Chronic intestinal marasmus, bone lesions, emaciation, anæmia, subacute bronchitis, glandular swellings, furunculosis and many other skin lesions, and commencing meningitis. The prophylactic value of the test, which enables one to separate the tuberculous from the non-tuberculous, is illustrated by its recent employment by von Pirquet at an orphan asylum at Baltimore. Of 227 children tested, positive reactions were found in six between one and three years, and in nineteen between four and six years, but not a single child below one year reacted. Von Pirquet thinks that a similar cutaneous diagnosis of syphilis will be possible as soon as the spirochæte can be cultivated and an extract made of the same concentration as tuberculin.

J. D. ROLLESTON.

The cutaneous tuberculin reaction in children (*Nord. Med. Ark.*, 1909, *Afd. II*, No. 14, p. 25).—**E. Hellesten** used von Pirquet's test in 418 children. He employed old tuberculin either in 25 per cent. solution or undiluted without any disagreeable results; 38 per cent. of the children gave a positive reaction. Of 58 cases of clinical tuberculosis 56 were positive.

The two exceptions had tuberculous meningitis. In 59 cases in which tuberculosis was suspected a positive reaction was obtained in 59 per cent. In the remaining 301 in which tuberculosis had not been suspected, a positive result was obtained in 23 per cent. The percentage of positive reactions rose from 2 in the first year to 46 in the period between 10 and 14 years. Hellesen concludes that a positive reaction in the first year is of value in diagnosis, while a negative reaction is of practical significance throughout childhood.

J. D. ROLLESTON.

Death following the intra-dermo-reaction of tuberculin (*Bull. et Mém. de la Soc. Méd. des Hôp. de Paris*, 1910, xxix, p. 494).—**J. Comby**.—A girl, aged 21 months, was admitted to hospital with an inflammatory swelling of the right thigh. Mantoux's intra-dermo-reaction had been performed eight or ten days previously. A round slough gradually formed, which on separating left a deep ulcer covered by unhealthy granulations. Measles developed shortly afterwards, and death took place, the lesion on the thigh having considerably increased in extent. Comby has never seen any complication with Von Pirquet's cuti-reaction, which he therefore prefers to Mantoux's method.

J. D. ROLLESTON.

Bovine tuberculosis (*Arch. of Pediat.*, xxvii, 1910, p. 448. *New York Academy of Medicine [Pediatrics Section]*, May, 1910).—**Park** is of opinion that there is much more tuberculosis in young infants than is ordinarily believed, and that at the Babies' Hospital (New York City) during the past year the majority of all cases of meningitis were tuberculous, and also a considerable percentage of cases diagnosed as broncho-pneumonia and marasmus. With others he investigated 434 cases; in 296 adults over sixteen there was found only one case of bovine infection (a tuberculous deposit in one kidney), in 54 children between five and sixteen there were 9 cases of bovine infection, and in 84 children under five there were 22 cases of bovine infection. The sparse growth of early cultures of the bovine type as contrasted with the vigorous growth of the human type on glycerine egg was taken as the best cultural test for differentiating the two types. He attributes the greater presence of bovine infection in children under five to the milk supply, as 10 to 20 per cent. of all cattle supplying milk to New York were tuberculous, and suggests that all milk for infants should be obtained under specially clean conditions, and certified free from tubercle bacilli and all other pathogenic bacteria, while for older children the supply should be the pasteurised milk of cows showing no evidence of disease.

J. E. BULLOCK.

Erythema nodosum and tuberculosis (*Thèses de Paris*, 1909-10, No. 196).—**Mlle. Pérel**.—This thesis contains twenty-two cases, ten of which are original, in which erythema nodosum was associated with some form of tuberculosis such as pulmonary tuberculosis, tuberculous meningitis, Pott's disease, tumor albus of knee, and tracheo-bronchial adenitis. In the ten personal cases the intra-dermo-reaction was invariably positive, whereas control experiments performed with injections of saline solution, anti-diphtheritic or anti-tetanic serums never produced a nodular reaction (*cf. BRITISH JOURNAL OF CHILDREN'S DISEASES*, 1910, p. 137).

J. D. ROLLESTON.

Erythema nodosum (*Thèses de Paris*, 1909-10, No. 290).—**E. Mallein** thinks that at present there is no justification for affirming the tuberculous

nature of erythema nodosum. The existence of cases in which tuberculosis is present is counterbalanced by those in which even the cuti-reaction fails to show any evidence of the disease. Erythema nodosum may be the sequel of any infection, though it is most frequently met with in connection with gonorrhœa, syphilis, typhoid and tuberculosis, so that it is impossible to affirm in any case the identity of this eruption with the concomitant affection. The thesis contains the histories of twenty-six cases, nine of which are original.

J. D. ROLLESTON.

Herpetiform eruptions following infectious diseases (*'Dermat. Zeitschr.,'* xvii, 1910, p. 307).—**E. Pflugbeil** records a case of a generalised herpetiform eruption occurring on the fourth day of an attack of diphtheria and accompanied by exaggeration of the reflexes, disturbance of sensation, and weakness in the extremities. He has collected six other cases from literature of similar eruptions in the course of diphtheria, including Slater's (*vide BRITISH JOURNAL OF CHILDREN'S DISEASES*, 1908, p. 29), three following gonorrhœa, two in cerebro-spinal fever, one after malaria, and six after typhoid or septic infections. Owing to the occasional discovery of the specific micro-organism in the vesicles, Pflugbeil is inclined to regard these eruptions as metastatic products due to the presence of the micro-organisms themselves rather than as angio-neuroses due to their toxins.

J. D. ROLLESTON.

The thyroid gland in infectious disease (*'Thèses de Montpellier,'* 1908-9, No. 89).—**P. Coudray**.—The defensive rôle played by the thyroid gland is manifested by the exaggeration of its secretion and increase in its volume which take place in infectious disease. Complete return to the normal condition may occur, or the hypertrophy may persist and give rise to Graves' disease, or lastly, atrophy of the gland with all the symptoms of thyroid insufficiency may result. The infections in which the reaction of the thyroid is most marked are pneumonia, typhoid fever, rheumatism, and tubercle. Cases have also been recorded after quinsy and syphilis, and Vincent mentions a case of Graves' disease which developed in convalescence from severe scarlet fever. The thesis contains the histories of thirty-one cases, four of which are original.

J. D. ROLLESTON.

Riga's disease (*'Gaz. des Hôp.,'* 1910, p. 930).—**Pironneau** records a case of Riga's disease or ulceration of the lower surface of the tongue in a boy, aged 9 months, in whom the lesion had destroyed the frænum and was invading the tip. The child had recently been suffering from broncho-pneumonia following measles. The ulcer was probably of traumatic origin, being due to constant attrition of the tongue against the lower central incisors, which had appeared at the early age of two and a half months. Extraction of the teeth was followed within three days by complete cicatrisation of the ulcer, which had lasted a fortnight and had not been affected by local applications of tincture of iodine and silver nitrate.

J. D. ROLLESTON.

Dilatation of the œsophagus (*'Archiv f. Verd-Krankh.,'* February, 1910).—**Umber** reports typical cases of "pulsion" diverticulum and of diffuse dilatation of the œsophagus in the upper and lower parts. In the first case the patient's father presented a similar condition, thus confirming the congenital tendency to a weakness of the muscle at the junction

of the pharynx and the œsophagus. The internal pressure exerted to propel the food along causes a protrusion of the wall in this situation, and in course of time a diverticulum is formed; hence the name "pulsion" diverticulum. The case of diffuse dilatation serves to prove that marked ecstasia may develop without primary stenosis, and is due to a primary congenital atony of the œsophageal wall.

T. R. WHIPHAM.

Gastric analysis in infants (*Journ. of Amer. Med. Assoc.*, May 7, 1910).—**Sherman**, after a number of analyses, finds that after the administration of barley-water the gastric juice in normal infants yields free HCl 2.1 degrees, total HCl 5.6, total acidity 9, while in children suffering from sour vomiting the amount is free HCl 4, total HCl 10.3, and total acidity 15.8. This shows that the hyperacidity is one of the common causal factors of the vomiting of infants. Clinical experience confirms this, for it is found that longer periods of abstention from milk-feeding are less apt to be followed by sour vomiting. Gastric rest with or without lavage and the administration of alkalies are indicated in these cases.

T. R. WHIPHAM.

Formed meconium simulating intestine (*Arch. of Pediat.*, xxvii, 1910, p. 203).—**R. G. Freeman** was sent for in haste by a practitioner, who stated that he had that morning delivered a woman of a healthy baby, and that the baby's bowel had since protruded from the anus and was turning black. On arrival Freeman found protruding from the anus a cylindrical coil half an inch thick and eight inches long with the characteristic colour of meconium. A photograph is given showing its resemblance to gangrenous intestine.

J. D. ROLLESTON.

Tabes dorsalis in children (*Med. Klin.*, January 23, 1910).—**Spitz-müller** reports a case of tabes in a boy, aged 13 years. There was no history of syphilis in the family, though the boy's serum gave a positive Wassermann reaction. The sudden development of enuresis at the age of nine, as in a number of the cases recorded, was the first symptom to attract attention. Ataxia was marked, but Marburg, who has collected fifty-one cases of infantile tabes, found it to be present in only 56 per cent.

T. R. WHIPHAM.

The early stages of acute anterior poliomyelitis (*Münch. med. Wochens.*, No. 48, 1910).—**Müller**, who has studied a recent epidemic in Westphalia, gives three cardinal signs on which to base a diagnosis in the early stages: (1) A tendency to perspiration, even in children with marked gastro-intestinal symptoms. (2) Extreme hyperæsthesia, which is very characteristic of the disease. This sign appears very early and quickly disappears. In the early stages the patient lies passively in bed, and the slightest movement, especially of the vertebral column, causes him to cry out. There is complete flaccidity of the muscles and often violent pains, especially in the legs. The absence of rigidity thus distinguishes the condition from meningitis. (3) Leucopenia, which persists in spite of the fever. Among other early signs are localised tenderness and weakness of the legs and abdominal muscles, the latter being shown by the presence of meteorism and the absence of abdominal reflexes. Motor paralysis is not observed for some days, and it may be not until after an apparent restoration to health. Frequently there is a great disproportion between the paralysis and the severity of the general symptoms. On lumbar puncture the cerebro-spinal fluid flows

freely. It is always clear, even when containing a large amount of albumin, and shows the presence of lymphocytes. The author thinks that infection enters by the respiratory or digestive tracts or by the tonsils, and spreads along the lymphatics of the nerves to the sub-arachnoid space of the spinal cord, and thence by way of the lymphatics accompanying the vessels of the spinal cord. Hæmatogenous infection is improbable. The reason why the grey matter is affected is partly because it is well supplied with blood-vessels and partly because it has a looser texture. T. R. WHIPHAM.

Paralysis of the neck and diaphragm in poliomyelitis (*Journ. of Amer. Med. Assoc.*, June 11, 1910).—**Snow** saw a boy, aged 4 years, who was suddenly attacked by fever, vomiting, and tenderness in the limbs, neck and trunk. In a day or two there was flaccid paralysis of the cervical muscles so that control of the head was lost, and the reaction of degeneration was present. The spinal accessory nerves were thus affected. At the same time a bilateral paralysis of the diaphragm was observed, indicating involvement of the phrenic nerves. The paralysis of the diaphragm began to improve after the third week and disappeared by the sixth. A jury-mast was fixed to the head, and after six months the cervical muscles had recovered though the sterno-mastoids were still weak. T. R. WHIPHAM.

The cerebro-spinal fluid in two cases of acute meningitis (*Ann. de Méd. et Chir. Infant.*, 1910, p. 153).—**Carles** and **Dupérieré**.—In view of the two cases which they report the authors emphasise the superiority of a bacteriological over a cytological examination of the cerebro-spinal fluid. The first case is that of a girl, aged $2\frac{1}{2}$ years, who had suffered for fourteen days from wasting, constipation, and vomiting, and for four days from convulsions, torpor, and headache. She showed the usual signs of meningitis with the exception of rigidity of the neck and Kernig's sign, which were not noted at any time. She died on the twentieth day of disease. Lumbar puncture was done four times, and on each occasion the cerebro-spinal fluid escaped under pressure and was clear. It showed an excess of lymphocytes with a few polynuclear and large mononuclear leucocytes. No tubercle bacilli were found. Meningococci were cultivated from it. Netter and Debré are quoted as stating that in meningococcal cases the cerebro-spinal fluid is clear in 75 per cent. examined in the first day, and in 55 per cent. after the first fortnight of the disease. Salebert and Monziols observed clear fluid with few cells in thirty abortive cases of meningococcal meningitis. In the authors' second case, an example of tuberculous meningitis in a boy, aged 5 years, the cerebro-spinal fluid showed abundant tubercle bacilli, while the cell-examination gave a differential count of polynuclear leucocytes 56·3 per cent., and lymphocytes 43·6 per cent. REGINALD MILLER.

The cerebro-spinal fluid in meningococcic meningitis (*Rev. de Méd.*, March, 1910).—**Mestrezat**, from an analysis of the fluid in three cases of cerebro-spinal meningitis, has deduced the following formula which serves to differentiate this form of meningitis from the tuberculous: Albumin 3 per mille or over; sugar 0·12 to 0·25 per mille; chlorides 6 to 7 per mille; nitrates in the form of sodium nitrate 45 to 55 per mille; freezing-point normal or below. The proportions were found to vary according to the clinical course of the disease. T. R. WHIPHAM.

Influenzal meningitis (*Arch. of Pediat.*, xxvii, 1910, p. 284).—**L. C. Ager** and **O. T. Avery** record a fatal case in a boy, aged 6 months. The

symptoms resembled those of tuberculous meningitis. Forty c.c. of cloudy cerebro-spinal fluid were withdrawn at the first lumbar puncture. At the second only a drop of thick pus could be obtained by suction. At the autopsy both frontal lobes were found to be covered with thick green exudate, which was adherent to the dura at the base in a manner which suggested that the cribriform plate was the entrance of the infection. Two small areas of yellowish exudate were seen over the upper part of the motor area. The brain tissue was very friable, and the ventricles were so distended that they immediately broke through on removal of the brain. The ears were normal. The spinal cord was not opened, but as seen from above was filled with thick milky pus. From the two specimens of cerebro-spinal fluid and from the meninges a pure culture of *B. influenzae* was obtained.

J. D. ROLLESTON.

Rare forms of congenital hydrocephalus (*Ann. de M'éd. et Chir. Infant.*, 1910, p. 321).—**Joukovsky**, dealing with those uncommon cases of congenital hydrocephalus in which there is no enlargement of the skull, reports three cases which he has observed. In one a congenital tumour of the pineal gland was the cause of the condition. In the second it was due to the blocking of the aqueduct of Sylvius by a blood-clot, the result of traumatism during delivery. The third he regards as due to meningitis produced during intra-uterine life by the toxins of Asiatic cholera. The mother of this case when six months pregnant had a severe attack of Asiatic cholera. The child was born at full term, and when four days old developed signs of hydrocephalus from which it died on the thirtieth day. At birth the head was normal in size and at first grew slightly, but later diminishing became smaller than its original size before death. Post mortem, hydrocephalus was found to be present, with other changes which the author suggests were the result of the mother's illness.

REGINALD MILLER.

The growth of the brain in infantile hypotrophy (*La Clin. Infant.*, March 15, 1910, No. 6, p. 179).—**Dr. Fayolle**, in his thesis, adduces the following conclusions: (1) The weight of the brain is very high in proportion to the total weight of a new-born infant: it exceeds a ratio of 1 to 10. During the first months of life, a period of intensive growth of the organism from the point of view of weight and height, the brain develops with an extreme rapidity; the weight of the brain doubles itself in six months and triples itself in a year; at two years it exceeds two thirds of the maximum weight it attains in the adult. It must be admitted that the greater part of the work of brain growth is effected at a very early period of existence. (2) In the arrest of growth constituted by hypotrophy, the arrest of brain growth when it exists is never so marked as the arrest of statural, and especially weight increase, and in the majority of instances cerebral growth is not influenced by arrest of general development. (3) Since, in normal infants, the growth of the brain takes place more rapidly than structural or weight increase, this precocity of brain increase is still more marked in the case of hypotrophic infants. The integrity of the brain during struggles against causes which retard growth is on all fours with the phenomena observed in inanition, where the tissues waste while the brain continues to be nourished in a normal degree.

VINCENT DICKINSON.

An unusual prodromal manifestation of epilepsy (*Journ. of Amer. Med. Assoc.*, April 9, 1910).—**Gordon** describes the case of a boy, aged 12

years, who was the subject of *grand* and *petit mal* and developed an unusual aura before the major attacks. Habitually morose, quiet, and of a pessimistic disposition, two days before the attacks he becomes restless and has a desire to embrace and kiss anyone he meets, and finally bites the kissed spot on the face. The kissing is only interrupted by eating and sleeping. Occasionally the kissing is replaced by prolonged laughter. At the same time his appetite is enormous and the excretion of urine is excessive. The author is inclined to think that these peculiar manifestations may be considered as attacks of *petit mal*.

T. R. WHIPHAM.

Leg sign in tetany ('*Wien. klin. Wochens.*,' March 3, 1910).—**Schlesinger** describes a sign which he thinks may prove the presence of tetany in the intervals between the attacks. With the patient lying on his back if the extended legs are passively lifted the knees show a tonic muscular spasm of extension, while the foot assumes a position of extreme supination or extreme pronation. The sign is also elicited spontaneously if the patient sits up in bed, or when standing bends forwards at the hips. The tonic spasm is preceded by paræsthesia in the limb.

T. R. WHIPHAM.

Amaurotic family idiocy ('*Ophthalmoscope*,' 1910, p. 493).—**E. Bellingham Smith** gives a full clinical report of a case in a female child, aged 11 months, describing his patient as in the second stage of the disease. In most particulars the case conforms to the usual type as originally described by Waren Tay. The subject is of Jewish parentage and presents slight spasticity, mental torpor, muscular weakness and commencing loss of sight. In the eye-grounds the changes are typical: pallor of the discs and a cherry-red spot in the macular regions, bilateral and symmetrical. The cerebro-spinal fluid as obtained by lumbar puncture was under rather diminished pressure, and was negative to bacteriological examination and to the Wassermann reaction. Three points are of special interest. The patient is the third child in the family, the other two being normal. The muscles of the neck, usually the first to become weak, here retain their power. Thirdly, there is an absence of any shock-like movements which are generally seen in this disease when the sight is severely affected.

REGINALD MILLER.

Surgery.

Malignant hypernephroma in children ('*Beitr. z. klin. Chir.*,' January, 1910).—**Franck** gives details of the case of a boy, aged about 9 years, who had always been pale and weak. Six weeks after an attack of acute pericarditis the symptoms of malignant disease became manifest and the tumour soon extended into the thorax. This is the fourth case reported of a malignant hypernephroma in children. The others occurred in children between the ages of two and five years, and in one case developed in a horse-shoe kidney. No hæmaturia was observed, but all were extremely malignant.

T. R. WHIPHAM.

The growth of bone against resistance ('*Surg. Gyn. and Obst.*,' vol. x, No. 4).—**Kerr** describes the case of a boy, aged 10 years, in whom the diaphysis and lower epiphysis of the tibia and part of the astragalus were removed for osteomyelitis. When the acute infection had subsided the lower

end of the fibula was implanted in the upper surface of the astragalus and arthrodesis was performed at the superior fibulo-tibial articulation. As a quarter of the growth comes from the upper epiphysis of the tibia it is important that this part should be retained, and in this case the fibula was used to ensure development. In three years the fibula grew 3.5 cm. and the boy now has a useful leg and foot.

T. R. WHIPHAM.

Plastic bone operation (*'Zentralbl. f. Chir.,'* No. 16, 1910).—**Buttner** removed the lower third of the tibia in a child for a sarcomatous cyst of the bone, the lower epiphysis and small part of the periosteum being left. The upper part of the shaft was then split by means of a Gigli saw and a chisel from the tibial tubercle downwards, half being separated from the periosteum and turned downwards so that the upper end could be implanted in the lower epiphysis. The defects in both parts of the bone were then filled with iodoform bone-wax and the wound was closed. Healing was perfect, and in six weeks the child was walking. There has been no recurrence.

T. R. WHIPHAM.

Intra-human bone-grafting and re-implantation of bone (*'Ann. of Surg.,'* vol. I., No. 6).—**Macewen** had to remove the whole shaft of the humerus for osteomyelitis in a child, aged 3 years. At the end of fifteen months only two inches of bone at the upper end had regenerated. An opening was consequently made between the muscles where the periosteum should have been, and fresh bone-chips, taken from the tibia of a six-year-old boy, were inserted. Some of the chips were covered by periosteum, but most of them were bare. The wound healed, and two months later there was new bone where the chips had been inserted and union with the upper fragment. At this time similar bone-grafts were inserted between the muscles and they also grew. It is now thirty years since the operation, and the arm is useful and has grown in length, though three inches shorter than the sound limb. The growth has occurred almost entirely from the proximal epiphysis, although an increase of one inch has taken place in the region of the chips. In another case, a girl, aged 15 years, part of a rib was inserted into the jaw to replace half of the horizontal ramus which had been previously removed for disease. The rib was resected subperiosteally and wired to the ascending ramus behind and in the mid-line in front. One small portion of the transplanted bone became loose, but the jaw is firm.

T. R. WHIPHAM.

Dry caries of the hip-joint and juvenile arthritis deformans (*Rev. de Chir.,'* March, 1910).—**Rottenstein** and **Houzel** liken the dry form of tuberculous arthritis in the hip to Volkmann's dry caries of the shoulder. The lesions have been described as juvenile osteo-arthritis deformans or atypical coxalgia. Pain, inability to move the limb, and contraction of the muscles are early symptoms, and the absence of granulations and effusion in the joint are characteristic. The condition lasts about two years and ends by ankylosis of the joint. Some cases have been operated upon owing to a mistaken diagnosis, but continuous extension and immobilisation of the joint by means of a plaster-of-Paris bandage to secure ankylosis in a good position is the treatment recommended.

T. R. WHIPHAM.

Ablation of the thymus (*'Presse Méd.,'* April 9, 1910).—**Veau** and **Olivier** describe their method of subcapsular thymectomy for hypertrophy of

the thymus. They have performed the operation in four cases up to the present, and state that it is easy, harmless, and effectual.

T. R. WHIPHAM.

Tuberculous stenosis of the pylorus (*Beitr. z. Klin. Chir.*, March, 1910).—**Von Tappeiner** saw a boy, aged 12 years, who for nine months had suffered from pains in the gastric region and vomiting. The symptoms at first were at intervals, but they gradually became worse until they occurred after every meal and the patient lost considerably in weight. Gastro-enterostomy was done as stenosis of the pylorus of a tuberculous nature was diagnosed, and this proved to be correct. The patient subsequently showed a marked improvement in spite of the fact that at the operation his condition did not permit of a resection being performed. Twenty-six similar cases are reported in the literature: eight of these underwent resection and the rest gastro-enterostomy, excision of the ulcer, pyloroplasty, or merely an exploratory laparotomy. Nearly all died within a year from a dissemination of the disease in other organs. Four of the cases were under the age of twenty.

T. R. WHIPHAM.

Ileus in children (*Arch. f. klin. Chir.*, xci, No. 4).—**Alapy**, from a study of forty-five cases from a few weeks to fourteen years of age, states that in older children the conditions resemble those in adults, but in younger ones more is to be learned from palpation. Megacolon and invagination occur almost exclusively in children and are easily recognised. There were only five cases which did not belong to either of these classes. In ten cases preceding appendicitis was responsible for the ileus. The signs of invagination are always alike, and absence of rigidity in the abdominal walls is a noticeable feature. Prompt operation, doing as little harm as possible, is often essential, and enterostomy should be done more readily, perhaps, than in the case of adults. Resection is rarely necessary for invagination. If it is difficult to reduce it is due to defective technique and not to adhesions. In many forms of occlusion of the intestine in children medical measures alone may be given a trial, but only for a short time. The ileus must be quickly reduced as children have less resisting powers than adults. When the ileus is strangulated, an opening above does not restore the circulation in the parts below, but enterostomy allowing the escape of gas and fæces followed by suture of the incision at once may give great relief and lead to a favourable result. Even with supposed strangulation an enterostomy may cure, as the diagnosis may have been wrong, and the child should be given the benefit of the chance. The permeability of the intestines became spontaneously restored after enterostomy in all the cases of ileus from adhesions without even the necessity for separation of the adhesions. The ileus in these cases is generally the result of some error in diet and the enterostomy allows the removal of the offending material.

T. R. WHIPHAM.

Appendicitis in children (*Pediatrics*, xxii, 1910, p. 413).—**Wood**, referring to the special features which differentiate appendicitis in children from the disease in adults, states that, anatomically, the appendix is relatively larger and longer in the child; the walls are thinner and the meso-appendix shorter, the entrance from the cæcum is funnel-shaped, the lumen larger, the mucous membrane smoother, the valve of Gerlach often ineffective to prevent foreign bodies or morbid materials entering the tube; and the omentum is

relatively smaller and less capable of walling in a gangrenous and perforated appendix. Pathologically, appendicitis in children induces a greater effusion of serum, and as lymphoid tissue is more abundant and the blood-supply poor, gangrene and early perforation are more common in the child. Abscesses are more likely to form and to rupture, there is a greater tendency to spreading peritonitis, and toxæmia is more rapid and intense. Clinically, appendicitis in the child is more sudden in its onset, rapid in its progress, and intense in its symptoms. The unstable condition of the nervous system in childhood may lead to confusion or error, and may delay or prevent a positive diagnosis; right-sided pleurisy or pneumonia with pain, tenderness and rigidity in the right iliac fossa may render the clinical phenomena vague and misleading. An abnormal position of the appendix (common in children) may give pain and other symptoms in the left side of the abdomen, in the epigastrium, or under the costal arch. He thinks that the cardinal symptoms which point to appendicitis in the adult are irregular, uncertain, and of little diagnostic value in the child; a late diagnosis is too often arrived at, leading to a high mortality, whereas an early diagnosis is imperative, followed by immediate operation.

J. E. BULLOCK.

Ventral hernia with ectopia of the heart (*'Bull. de l'Acad. de Méd.,'* March 1, 1910).—**Kirmisson** reports the case of a child who was born with a ventral hernia just above the umbilicus, and another tumour above it, also in the middle line. The latter proved to be the apex of the heart presenting through a cleft in the sternum. The case is identical with that described by Vaquez and Foy, in which the patient, a man, lived until thirty-seven years of age. The author could only find two other similar cases in the literature, but Lannelongue has a patient, aged 22 years, and still in good health, upon whom he operated when a fortnight old for a similar ectopy. In this case the apex of the heart protruded through a cleft in the upper part of the sternum and also through a gap in the skin. As the opening began to constrict the organ a plastic operation was performed with an excellent result. The patient, a woman, is in perfect health and is the mother of three children. There are no abnormal auscultatory signs in the heart, and the absence of pericardium is not felt. No adhesions formed after the operation.

T. R. WHIPHAM.

Pathology.

Experimental diphtheria in the chimpanzee (*'Ann. de l'Inst. Past.,'* xxiv, 1910, p. 114).—**E. Burnet**, working in Metchnikoff's laboratory at the Institut Pasteur, inoculated nine chimpanzees with pure cultures of diphtheria bacilli, or with membrane recently removed from human patients. Three methods of inoculation were employed: (1) Rubbing the membrane or painting the culture on the intact mucous membrane of the tonsils; (2) the same operation after scarification or puncture of the mucous membrane; (3) insertion into the nasal fossæ. Seventeen inoculations were made, of which five produced mild lesions consisting of a more or less extensive exudation containing diphtheria bacilli associated with other organisms. In only one case were the lesions very extensive, and the animal died six days after inoculation. The remaining eleven inoculations proved unsuccessful. Paralysis did not occur in any case. Inoculations with pure cultures of diphtheria bacilli had no effect, but all the lesions produced were due to inoculation with membranes. Attempts to inject lower apes were unsuccessful.

J. D. ROLLESTON.

The diagnostic value of the *Spirochæta pallida* in the umbilical cord ('*Boston Med. and Surg. Journ.*,' May 12, 1910).—**Emmons** has searched for the *Spirochæta pallida* in the umbilical cord in thirty cases which were presumably syphilitic and finds that the organisms are rarely present in the cords of newborn infants. When present they occur in considerable numbers in the muscularis of the umbilical vein, especially near the child's umbilicus. Owing, however, to the frequency of negative findings a routine examination of the cord on these lines is hardly justified.

T. R. WHIPHAM.

The vascular pathology of congenital syphilis ('*Cleveland Med. Journ.*,' 1910, p. 339).—**O. T. Schultz** regards a widespread involvement of the smallest vessels as more characteristic than the diffuse fibrosis which may occur. The first vascular change, which is due to the localisation of the treponemata in the terminal vascular ramifications, consists of a hyperplasia of the endothelium and a slight perivascular lymphoid infiltration. When this change becomes extreme it forms the earliest stage in the formation of a gumma. In the medium-sized and in the largest vessels an inflammatory reaction characterised by the presence of lymphocytes and young connective tissue cells may occur in the adventitia and media. In congenital syphilis the involvement of the arterioles and capillaries is more widespread than in the acquired disease. The pathological change in the larger vessels is the same in both forms of the disease, and is the expression of the entrance of the treponema into the lymphatics and capillaries of the vessel-wall. Further changes depend upon the intensity of the infection and of the tissue reaction. When the infection is slight a nodular area of sclerosis may be produced; if it is more intense the tissue reaction is more marked and diffuse; in extreme cases a gummatous arteritis results.

J. D. ROLLESTON.

Infection from "*Leishmania infantum*" in dogs ('*La Pediat.*,' April, 1910, No. 4, p. 241).—**Prof. Jemma** with **Drs. Gristina** and **Cannata** have conducted a series of experiments by injecting splenic blood from children affected with the disease into dogs. From the results they came to the conclusion that not all the dogs injected resisted the infection, whether it were made intra-peritoneal or intra-venous. When the animal contracted the infection it became cachectic and lost weight, had slight oscillations of temperature and changes in the blood. The infection contracted by the dog seems analogous to that observed in man, since in both there is tendency to cachexia. The histological changes in the various organs were those of fatty degeneration and endothelial proliferation.

VINCENT DICKINSON.

Infantile splenic anæmia; blood changes ('*La Pediatria*,' May, 1910, No. 5, p. 323).—**S. Cannata** examined the blood in five cases of splenic anæmia associated with Leishman's parasite. He found the hæmoglobin content always diminished, varying from 75 per cent. to 45 per cent. In the same subject it diminished when the disease became more severe and increased during periods of improvement. The red corpuscles were usually diminished in number; only in one case did they reach 4,000,000. Their form and colour varied in fresh preparations according to the condition of the patient. Only in one case were there poikilocytosis, normo- and megalocytosis.

blasts, polychromatophilia; in all the rest nothing of importance was noticed except a slight polychromatophilia. The globular value varied in different children and according to the course of the disease. Generally it oscillated round unity, being a very little either above or below. The number of white corpuscles also varied in different children; in no instance did it reach a high figure, the maximum being 20,000 and the minimum 7200. It underwent remarkable variations in one case, falling from 16,000 to 9700 in seven months; in another case it was 14,500 in March, 9520 in April, 20,000 in November, and 7200 in February. Mononuclears were often found to predominate over polynuclears. In the majority of cases the small mononuclears predominated, but this was not constant. Among the large mononuclears a few myelocytes with neutrophile granules were found in all the cases. In a word, the blood varied not only in different cases but also in the same subject in different periods of the illness. This, in the opinion of the author, depends on the fact that the reaction of the organism to Leishmanian infection also varies according to the age and constitution and gravity of the infection. Hitherto great importance has been attached to the blood examination in the diagnosis of splenic anæmia, but this has lost its importance now that the specific agent has been recognised. The surest way of establishing a diagnosis is the discovery of Leishman's parasite in the splenic blood; sometimes the parasite is only discoverable after several splenic punctures.

VINCENT DICKINSON.

The elastic tissue of the spleen in certain diseases of children (*Lo Sperimentale*, 1909, p. 45).—G. Menabuoni examined the elastic tissue of the spleen in twenty-four children who died from diphtheria between the ages of ten months and eighteen years, and of thirty-four children between the ages of five days and eleven years who died from various diseases. He finds that in acute diseases, *e.g.* diphtheria, typhus, broncho-pneumonia, scarlatina, etc., the elastic tissue did not undergo any marked alteration; in rickets, in the majority of cases, especially if well marked, the elastic tissue was increased in the same proportion as the connective tissue: in prolonged congestion the same result was noticed. The elastic tissue of the spleen is present normally in variable quantity within wide limits and seems to increase with age. Syphilis and rickets are frequent causes of an increase both of connective and elastic tissue. In the amyloid degeneration of tubercle the elastic fibres may disappear entirely from the degenerate zone. In infants there is swelling, breaking up, and eventually disappearance of the elastic tissue. In infantile splenic anæmia there may be increase of elastic tissue if the sclerosis is much advanced, but if this is not evident the elastic tissue shows no distinct change.

VINCENT DICKINSON.

Experiments on the functional activity of the mammary gland (*La Pediat.*, April, 1910, No. 4, p. 253).—G. D'Errico, experimenting with bitches, found that (1) the *intra-venous* injection of the defibrinated blood of a pregnant bitch into a suckling bitch produced a temporary arrest in the secretion of milk; (2) the *subcutaneous* injection of the same blood of a pregnant bitch had no effect on the lacteal secretion; (3) the *intra-venous* injection of the defibrinated blood of a *normal* bitch did not modify the lacteal secretion.

VINCENT DICKINSON.

Treatment.

Diphtheria antitoxin in non-diphtheritic angina ('*Gaz. des Hop.*,' 1910, p. 929). —**G. Mouriquand** records five cases resembling diphtheria in their local and general symptoms but distinguished from it by the absence of Klebs-Loeffler bacilli. Though examination of the throat showed cocci only, injection of antitoxin was followed in each case by rapid separation of the membrane which had resisted the action of local measures. Mouriquand follows Mongour and Cruchet, who have reported similar cases, in regarding diphtheria antitoxin as specific not only for Klebs-Loeffler bacilli but for several other micro-organisms.

J. D. ROLLESTON.

Treatment of whooping-cough and catarrh of the air-passages by abdominal massage ('*Fortschr. der Med.*,' February 17, 1910). —**Hönck** has previously called attention to the connection between catarrh of the upper air-passages and irritation of the abdominal sympathetic nerves. He finds that massage of the abdomen is almost a specific in many cases of whooping-cough free from febrile complications, though mild fever in itself is no contra-indication. Cautious massage is applied to the back on both sides of the spine. In a number of cases whooping-cough was thus cured in three weeks at most, but when he stopped the massage after a week the attacks became more frequent and violent. Cough from a tickling sensation in the throat, he says, is also controlled by this method of treatment.

T. R. WHIPHAM.

The serum treatment of epidemic cerebro-spinal meningitis ('*Med. Klinik*,' 1910, p. 580). —**Mathilde Lateiner**. — During the last three years 50 cases were treated in the children's section of the Kaiser Franz Joseph Hospital in Vienna. The diagnosis in each case was confirmed by bacteriological examination. Eighteen were sucklings, 11 were children up to the third year, 9 up to the sixth year, and 12 were above that age. Twenty-four were treated with lumbar puncture only, with a mortality of 70 per cent., and 26 with lumbar puncture followed by injection of serum. Five, of whom 3 died, were treated with Ruppel's dried serum subcutaneously. Twenty, of whom 8 died, received intra-spinal injections of the serum from the Vienna sero-therapeutical institute, and in one case both serums were used. On exclusion of the sucklings the results from the employment of serum were still more satisfactory, the mortality being 26·6 per cent. among the injected as contrasted with 72·7 per cent. among those not injected. Lateiner attributes the rarity of hydrocephalus among her cases to the employment of lumbar puncture, for whereas among Weiss-Eder's 43 cases and Jehle's 96 cases hydrocephalus developed in 18 and 17 cases respectively, this sequel occurred in only one of the present series, exclusive of two in whom it was present on admission to hospital. Of the 21 patients who were discharged recovered the subsequent history was learnt in 13. Two had died, one a year later from tuberculous peritonitis, and the other four months later, cause unknown; one was deaf and dumb; and another was ill-developed mentally and physically. The condition of the remaining 9 was satisfactory.

J. D. ROLLESTON.

Cerebro-spinal meningitis treated by intra-ventricular injections of Flexner's serum; recovery ('*Pediatrics*,' xxii, 1910, p. 222). —**L. Fischer**. — A girl, aged 2 months, breast-fed, was admitted to hospital on

the fourth day of an attack of cerebro-spinal meningitis. Three successive lumbar punctures yielding a "dry tap," the right lateral ventricle was punctured by an aspirating needle introduced at the right angle of the anterior fontanelle and 15 c.c. of turbid fluid were withdrawn, smears from which showed meningococci. The ventricles were then irrigated with normal saline solution at 105° F. After the excess of fluid had drained out, 25 c.c. of Flexner's serum were injected into the ventricle. Intra-ventricular injections of serum preceded by irrigation were performed on two subsequent occasions, 65 c.c. in all being used; 37 c.c. were also introduced by the intra-spinous route. The child, which was nursed at the breast throughout the disease, was discharged in good health after two and a half months' stay in hospital.

J. D. ROLLESTON.

Ehrlich's new remedy for syphilis (*Berl. klin. Wochenschr.*, July 25, 1910, p. 1401).—**L. Michaelis**.—The new arsenical preparation, dioxo-diamidoarsenobenzol, introduced by Ehrlich for the treatment of syphilis, is said to cause the manifestations of syphilis to disappear after one injection. The substance was prepared by Ehrlich in the form of a hydrochlorate, but as this is unsuitable for injection owing to its acid reaction Michaelis uses a neutral suspension of the drug (obtained by dissolving in excess of soda and neutralising by acid). Michaelis reports the case of a congenitally syphilitic infant, aged 5 weeks, in whom palmar and plantar syphilides and a general maculo-papular eruption disappeared after a single intra-muscular injection of 0.06 grm. of the drug. The alleged remarkable effects of this new preparation require further confirmation before they can be accepted. It also remains to be seen whether this drug is free from the danger of causing optic neuritis, a danger which has, or should have, caused the new arsenical compounds, atoxyl and the rest, to be abandoned.

C. F. MARSHALL.

Treatment of vulvo-vaginitis in children with gonococcal vaccines (*Hospitaltidende*, 1910, No. 27, p. 801).—**H. Boas and O. Wulff**.—Two cases of gonorrhoeal vulvo-vaginitis were treated with gonococcal vaccine only and showed absolutely no improvement. Seven cases who were given local treatment as well as the vaccine had a more protracted illness than seventeen other cases who had the same local treatment without the vaccine. The opsonic index, which was below the normal before the vaccine treatment, rose under treatment.

J. D. ROLLESTON.

Auto-sero-therapy of tuberculous peritonitis by continuous subcutaneous drainage (*Med. Klin.*, April 10, 1910).—**Evler** applies the principle of auto-drainage recently introduced in the treatment of hydrocephalus to the ascites of tuberculous peritonitis. The recti muscles are separated and the peritoneum is sutured to the opening thus made, so that there is a permanent fistula into the subcutaneous tissue. Over this the skin is completely sutured. The ascites thus drains away and induces an auto-sero-therapy. In the patient operated upon improvement was marked from the first: the ascites did not recur and weight was rapidly gained.

T. R. WHIPHAM.

Treatment of the early stage of acute anterior poliomyelitis (*Münch. med. Wochens.*, No. 49, 1909).—**Hohmann** advocates the method

adopted by Lauge, who, noticing that the slightest movement of the spinal column in the initial stages of the disease caused evident pain, applied a plaster-of-Paris jacket, with the result that the pain was perceptibly diminished within a few hours. The fixation of the vertebral column also probably modifies the inflammatory processes in the spinal cord, and is in accord with Oppenheim's suggestion that the patient should be put to bed and protected as far as possible against all forcible or active movements.

T. R. WHIPHAM.

The operative treatment of spastic diplegia (*Deutsch. med. Wochens.*, May 12, 1910).—**Hevesi** applied Foerster's operation of resecting the posterior nerve-roots in a child, aged 11 years, who was the subject of spastic diplegia. The child had never been able to walk without aid, but after laminectomy and resection of three or four of the posterior roots on either side in the lumbo-sacral region walking alone was possible after seven weeks. No special sensory disturbances nor ataxic symptoms were noted.

T. R. WHIPHAM.

The treatment of convulsions (*The Therapeutic Gazette*, July 15, 1910, p. 495).—**Chapin** gives a few concise directions for the immediate treatment of convulsions in children, as follows: The application of ice or a cold compress to the head; immersion of the feet and legs in water comfortably hot to the hands of the nurse, this partial bath being as efficacious as total submersion, and allowing of treatment by the bowel; a simple enema will often bring away undigested masses, after which the convulsions may cease. If the child can swallow, 3 to 5 gr. of potassium or sodium bromide can be given at intervals of ten minutes as required. If the child cannot swallow he recommends 3 to 5 gr. of hydrate of chloral injected *per rectum* by a small piston syringe; this may be repeated in a quarter of an hour if distinct improvement is not noted. In intractable convulsions accompanying organic disease of the brain, when bromides by the mouth and chloral *per rectum* are of no avail, he recommends a few whiffs of chloroform from time to time.

J. E. BULLOCK.

Reviews of Books.

THE DISEASES OF INFANTS AND CHILDREN. BY EDMUND CAUTLEY, M.D., F.R.C.P. London: Shaw and Sons, 1910. Pp. 1042. Price 28s. 6d. net.

THE object of this work on diseases in children, as stated in the preface, "is to describe the ailments of children in a form suitable for the general practitioner of medicine, and sufficiently detailed to render further reference to other works unnecessary, except in the case of unusually rare diseases." This object the author has fully obtained, for there is no other book so complete and so detailed with regard to this branch of medicine. The volume must necessarily be one of reference, for it is so large that it is impossible for anyone to read it as an ordinary text-book. Nevertheless it is very complete, as there is scarcely a single subject associated with

disease in children which is not mentioned in it. Every subject is dealt with in a systematic and concise manner, so that it can easily be understood by the reader. Great advance has lately been made in the knowledge of disease in early life by the formation of the Society for the Study of Disease in Children, in 1900, which, after eight years of active and useful work, became amalgamated with the Royal Society of Medicine, and also by the foundation of the *BRITISH JOURNAL OF CHILDREN'S DISEASES* by the late Dr. George Carpenter in 1904. There was therefore an urgent necessity and a splendid opportunity for an up-to-date book on the subject. Dr. Cautley's book meets this necessity most worthily, and too much praise cannot be given to the author for the great amount of work he has undertaken in producing it, and for the diligence with which he has collected everything of importance dealing with disease in children. The book comprises twelve sections, which are divided into seventy-three chapters. The sections are under the following headings: General factors; affections of the new-born; disorders of metabolism, nutrition, and growth; the alimentary system; the respiratory system; the circulatory system; the hæmopoietic system; the urogenital system; the nervous system; the skeletal system; infective disorders; and the special sense organs.

The chapter on the medical examination of children is full of useful hints, and demonstrates how very completely the author has mastered the psychology of childhood. Chapter III is especially worthy of notice, for it is devoted to diet and nutrition, and is a valuable contribution of over forty pages. The tables in this chapter are very helpful.

There are numerous tables scattered throughout the book, which greatly increases its value. None of these tables are superfluous. The synonyms of the various diseases are given; in many cases, however, the synonyms are very numerous, and in some instances they appear rather exaggerated and far-fetched. Certain diseases are rather overlaid with personal titles, and this seems to us undesirable, especially so where the disease is given only the describer's name, as "Buhl's disease," "Winckel's disease," "Sprengel's deformity," etc.

There are no diagrams, illustrations, or charts, and the author gives very plausible reasons for their absence in the preface, in which he writes: "The kindergarten teaching of medicine by pictures, diagrams, and models is advantageous for the student, but may prove a disadvantage to those in active practice. Photographs and drawings, except of pathological states, are of little value unless so typical that the veriest tyro can recognise the disease from a description. They are injurious in that the expectation of seeing the typical cases of pictorial illustration increases the danger of overlooking those early stages in which disease is amenable to treatment."

The treatment of disease, which is usually a weak point in most textbooks of medicine, takes a prominent place, for it is very thoroughly described. The different modes of treatment are discussed, and scarcely any modern method is left untouched. The author has dealt very systematically with the differential diagnosis of disease in children.

We prophesy a brilliant future for this book, for there is no other in the English language so complete. There is no loose writing as might be expected to be found in so large a work. We can thoroughly recommend 'The Diseases of Infants and Children' to all practitioners of medicine, for they will find it a most valuable book to which they can confidently refer.

DIE ORTHOPAEDIE DES PRAKTISCHEN ARZTES. By SAN.-RAT Dr. GEORG MÜLLER. Berlin and Vienna: Urban and Schwarzenberg, 1910. Price M. 8, paper cover; M. 10, bound.

Dr. GEORG MÜLLER's book is essentially a practical treatise on orthopædics, dealing as it does solely with those abnormal conditions of the bones and joints which result in physical deformity. It appeals, therefore, especially to the children's surgeon.

The work is divided into two parts. The first, which deals with the general methods of treating orthopædic cases, includes chapters on the various forms of splints and artificial supports, on massage and exercises, and on Bier's treatment by inducing hyperæmia, the value of which is enhanced by illustrations. The second, or "special" part, constitutes the greater part of the book, and is devoted to a consideration of the clinical and pathological aspects of the subject matter. Beginning with torticollis and ending with hammer-toe the various orthopædic affections are dealt with in consecutive order. In the chapter on "The Deformities of the Spine" special mention must be made of the sections dealing with scoliosis and tuberculous spondylitis, in which a clear and concise account of the ætiology, signs and prognosis is given together with a detailed and illustrated description of the various methods of treatment. In "The Deformities of the Upper Extremity" the different dislocations of the shoulder and Sprengel's deformity are considered together with the abnormalities of the elbows and the various defects and deformities of the hands and fingers. In "The Lower Extremity" the parts on congenital dislocation of the hip and tubercular disease of the hip and knee are excellent, the details of treatment being given with great minuteness. The condition of genu valgum also has received the author's special attention and merits equal commendation. In this and other conditions in which osteotomy is called for Dr. Müller shows a preference for the various forms of Heussner's osteoclast. Other diseases of the hips and knees are also dealt with and their appropriate treatment described, and the closing chapters of the book are concerned with tuberculosis of the ankle-joint and the various deformities of the foot and toes.

The book is one which we can recommend to the orthopædic surgeon as a useful and reliable work of reference. It is thoroughly practical, the details of technique being admirably and concisely set forth; it is, moreover, not difficult reading. The value of the treatise is increased by the illustrations of operative procedures and the different forms of splints and apparatus. The reproductions of photographs, of which there are some 150 altogether in the text, are in every way excellent, but some of the skiagraphs are a little disappointing.

There is no index, but a detailed table of contents at the beginning renders one almost unnecessary, as the various conditions are dealt with in their anatomical order. The type and printing are clear and good, but as is the case with many German books, the cover is merely of paper and the stitching is bad.